

(3)

Dr. Jeffries's.

A
T R E A T I S E
ON THE
PUERPERAL FEVER:

WHEREIN
The NATURE and CAUSE of that DISEASE,
SO FATAL TO LYING-IN WOMEN,
Are represented in a NEW POINT of VIEW
ILLUSTRATED by DISSECTIONS;

A N D
A RATIONAL METHOD OF CURE
PROPOSED,
CONFIRMED BY EXPERIENCE.

By NATHANIEL HULME, M. D.
Physician (in Ordinary) to *The City of London Lying-in Hospital*,
And to *The General Dispensary* for Relief of the Poor.

Maxima è minimis sæpe oriuntur.

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TO THE
PRESIDENT,
THE
VICE-PRESIDENTS,
TREASURER,
AND
GOVERNORS,
OF THE
City of London LYING-IN HOSPITAL,
THIS TREATISE
Is, with the greatest Respect,
INSCRIBED,
By their most obedient, and
Most obliged humble Servant,

Hatton-Garden,
Jan. 1, 1772.

NATHANIEL HULME.

P R E F A C E.

THE *Puerperal Fever*, is a disease peculiar to lying-in women. The term puerperal is derived from the Latin word *puerperus*; and, strictly speaking, signifies no more than childbed. But as this is the most dangerous of all childbed-fevers, some writers, by way of eminence, have properly called it *The puerperal fever*, to distinguish it from *The milk-fever*, or any other, incident to women after delivery.

Notwithstanding this disease hath been common to lying-in women in all ages, and in all climates, and even been described in the works of the first writer on the art of healing¹, yet being generally looked upon, rather as a symptom or consequence of some other disease, than

¹ HIPPOCRATES.

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a disease itself, it hath been either entirely over-looked, or only superficially described by the generality of medical writers; insomuch that we have scarcely had a determinate name, by which to distinguish it. Most authors have termed it, *An obstruction, or suppression of the lochia*; others, *An inflammation of the uterus*; some have called it, *The lochial fever*; some, *After-pains*; and, in the northern parts of Great Britain, it is said to be named *The weed*. But I am clearly of opinion that the *Puerperal Fever* is as much an original, or primary disease, as the ague, quinsy, pleurisy, or any other complaint incident to the human body. Physicians have so greatly differed likewise, concerning the nature, cause, and treatment of the *Puerperal Fever*, that it remaineth, to the present time, a subject of much dispute¹.

And what is of more fatal consequence than may at first be imagined, is the ignorance of people in general, and

¹ Vid. Chap. v.

particularly

particularly of lying-in women and their attendants, respecting this disease; which causes them either to neglect it, or to mistake it for *After-pains*, or some *Colic complaint*; and to this I ascribe, in some measure, the great fatality attending it, as will be shown more fully hereafter. It is of consequence, therefore, to the community, to be perfectly acquainted with the true nature, and danger, of this disorder; as it occasions the death of the greater part of those who perish in childbed!

Publick hospitals, for reception of the sick and hurt, are the grand seminaries of practical knowledge in the art of medicine. The utility of these institutions is so apparent, that they are now universally received all over Europe. Great Britain in particular hath not been behind-hand, in promoting such humane designs. Buildings of this kind, or which incidentally promote the same end, are to be seen in almost every part of this

great metropolis. Among the rest, THE CITY OF LONDON LYING-IN HOSPITAL rises up a simple, yet elegant, monument of her beneficence!* There the industrious poor meet with a safe and tender ASYLUM, in the hour of distress. But the bountiful hand of charity doth not stop here; it is also stretched out to provide them every medical assistance, under the various disorders which succeed a state of pregnancy. With this view, the supporters of that benevolent undertaking have a physician to attend to all the diseases both of the women, and children. And that his sole attention may be fixed to this one great point, the wisdom of that house directs, that he shall be a person who hath no connexion with the practice of midwifery; and be chosen under the name of *Physician in Ordinary* to that charity. The author

* This Hospital is entirely supported by a voluntary, annual Subscription; whereby four or five hundred poor Objects are admitted every Year, and relieved with all Necessaries during Childbed.

P R E F A C E. ▼

of this treatise, had that honour conferr-
ed upon him, some time ago. This cir-
cumstance hath afforded him frequent
opportunities of observing the rise and
progress of the disorder, now under
consideration, and hath furnished him
with many particulars in the following
discourse.

In the description of the disease he
hath endeavoured to separate from it
such symptoms of other distempers as
have erroneously been ascribed to this,
which precision is of the utmost conse-
quence in the description of every com-
plaint; lest one disease should be con-
founded with another, and the distinct
knowledge of each be rendered dark, and
intricate. For example, in the scurvy, how
many diseases, or symptoms of diseases,
as I have remarked elsewhere^{*}, have
been attributed to that simple mala-
dy, which do not belong to it? and how
many volumes have been written to de-

^{*} In Libello de Scorbuto, cap. i.

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scribe its effects, and manner of treatment?

But the author's principal design, in treating of the *Puerperal Fever*, hath been to search into, and to discover, its true origin and source, and to shew the various changes which it makes upon the human body; that we may be led to a more uniform, and certain method of cure. How far he hath succeeded in his attempts, is humbly submitted to future experience, and to the judgment, and candour of the discerning publick.

CON-

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Vere, scire est per causas scire.

Lord Bacon.

A
T R E A T I S E
O N T H E
P U E R P E R A L F E V E R.

C H A P. I.

Description of the Disease.

UPON the first, second, or third day after delivery, but most commonly on the second, the patient complains of violent pain and soreness over the whole hypogastric region; that is, from the navel downwards. The tenderness is often so acute, that the gentlest touch is almost insufferable. The belly feels commonly soft.

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Sometimes it will be greatly swelled; but, in general, at the beginning of the disease, it is not much more tumefied than what may be expected so early after delivery. There is no inflammation, or other discoloration, to be seen on the abdominal skin.

Though the pain of the belly be general, yet it commonly affects some one part in particular more than another. Sometimes the chief seat of pain will be in both the iliac regions; sometimes in one more than the other. At one time the region of the *os pubis*, or groin, will be the chief seat; at another, a violent pain will fix across the pit of the stomach, and strike through the short ribs, on each side, down to the spine. The pains will often put on the appearance of labour-pains, and shoot from the loins and belly into the groin and thighs. They are then generally mistaken, by the patient and her attendants, for after-pains, and being neglected, the disease quickly gains strength, and proves, by this means, too often fatal. When the pain lodges about the *pubes*, or groin, it will sometimes affect the *anus*, and neck

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neck of the bladder. But there is seldom any sense of heat, or throbbing pain, in the region of the *vagina*: and whenever this doth happen, it is probably owing to a different cause.

The pains of the *abdomen* are generally preceded by greater or less degrees of rigor, or convulsive shudderings with sense of cold. Sometimes there is no rigor; or, at least, so slight as not to be attended to by the patient. And, indeed, the rigor, in general, is much less than what is observable in many other fevers. Nor is the violence of the subsequent disease to be judged of by the degree of the preceding rigor. For sometimes a slight, or no rigor at all, will be followed by a severe attack of the disease, and a great rigor by a slight attack. The wife of ROFFE, for instance, began with a rigor which continued for an hour, and she recovered on the sixth day. The wife of COPE had no rigor, yet the disease proved mortal in a few days.

Though the first, second, or third day after delivery, be the common and almost constant times of the first beginning of the ma-

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lady, yet it is not without its variations. For, sometimes, it will come on from the very time of delivery, or even before, and be confounded with, or lost, as it were, in the labour-pains; or it may not appear till after several days. But these are only to be considered as varieties; however, such varieties as are always to be remembered by the physician, that he may not, at any time, be off his guard.

The patient, from the beginning, generally complains of a pain in the head, which is confined chiefly to the forehead, and parts about the eyebrows; this is frequently attended with a *vertigo*, or giddiness in the head, and want of rest.

There is much thirst. The tongue, on examination, commonly appears white, but seldom foul, and is soft and moist to the touch. A red line will sometimes run up the middle of it, and the whiteness remain on each side: in this case the red part is usually dry, and the white moist. Sometimes the tongue will continue white and moist till the approach of death; but, in general, before

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fore that period, it becomes very dry and rough, and changes to a dark brown colour, often with a mixture of yellow.

A general anxiety, or dejection of mind appears in the countenance, and the eyes participate of the same distress. The face is often flushed, and sometimes there is a deep red, or livid colour fixed in the cheeks.

The skin is generally hot and dry; but sometimes so cool and temperate, that a person from thence could hardly know whether the patient laboured under any disease or not. Sometimes intermediate sweats come on all over the body, and these usually relieve the patient; but they are more common when the disease begins to abate.

The pulse, in general, is quick and weak; though sometimes it will resist the finger pretty strongly. At the beginning of the disease, it seldom beats less than a hundred strokes in the space of a minute; and, from this number, I have found it run on to one hundred and sixty. The intermediate pulsations were various. The most common number

number was one hundred and twenty-eight; and the next general numbers were, one hundred and twelve, one hundred and twenty, and one hundred and thirty-two. The different habits of body, and circumstances of the disorder, will easily account for these variations in the pulse. When the disease proves mortal, the pulse at last becomes so quick and weak as scarcely to be numbered.

A shortness in breathing, without any wheezing or noise in the breast, generally accompanies the distemper from the beginning. This commonly keeps pace with the degree of pain in the *abdomen*. For if the pain be very moderate, the shortness in breathing is also very slight, or perhaps not at all perceptible; but if acute, the breathing is accelerated in proportion, and the pain is increased at every inspiration. I should be glad, in this article, to express myself so as to be rightly understood. I call it a shortness in breathing rather than a difficulty, because a difficulty in breathing may be attended with a full inspiration, and a desire of taking in a large quantity of air; whereas the breathing, I here mean to describe, is quite
the

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the reverse; the inspirations are quick and small, with a fear and dread, as it were, of making a full inspiration; or, in other words, of dilating the *thorax*. The reason of this, as I apprehend, is not, in general, owing to any complaint in the lungs, or chest (except when the pains extend to the region of the stomach and ribs) but merely to the grand seat of the disorder being within the *abdomen*, and which, at every inspiration, is squeezed, as it were, betwixt two presses; by the diaphragm from above, and the abdominal muscles from below. I almost shudder, with horror, when I consider the excruciating torments that must rack the distressed patient, under these dreadful circumstances! But the reader can have no adequate idea of what I mean till he comes to understand the true seat of the disease, by the help of dissections. As the malady increases, the shortness in breathing increases likewise, and before death closes the scene, the inspirations are often so small that the chest is hardly seen to move, and the breath seems no longer to distend the lungs, but to be confined to the *aspera arteria*, or upper part of the *thorax*.

A cough frequently attends, yet is no-ways essential to the disease, but merely accidental: however it usually proves troublesome, and, when violent, is not without danger; as may be learnt from what hath just now been hinted.

The patient, when the disease is violent, generally lies on her back, seldom turning on her side or belly.

Vomiting, with complaints of a load and sickness at the stomach, are very usual symptoms; however these are far from being always present. What is thrown up is commonly either yellow, green, or of a blackish colour. The vomiting will sometimes come on from the time of delivery, and not unfrequently precede it. When death approaches there is, for the most part, a continual discharge by vomit of whatever is taken; and what is brought up, is commonly either green, or black.

The belly, at the beginning, is generally costive. Sometimes it is very regular, at other

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other times a *diarrhoea* attends. When this last is the case, what is discharged is usually of a dark brown colour and very fetid; and the stools are sometimes covered with a whitish froth. Flatulencies in the bowels are very common, whether the belly be loose or costive. When the disease terminates in death, involuntary stools are the general harbingers.

The patient at first often complains of some difficulty in making water, and discharges it in small quantities; but this usually goes off after having a stool or two. The urine, after standing for some time to settle, generally appears of a brown colour, and deposits a crude sediment half floating at the bottom of the glass. What is meant by crudity in the urine is hard to define, and scarcely to be learnt but by ocular demonstration. It is a cloud, or settling in the urine, which the physician expects to be changed, or concocted, as it is commonly termed, by the progress of the disease, into a thick coloured sediment. But if a perfect flow of the *lochia* continues, during the disorder, then the urine, after settling, generally

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rally appears red and inflamed. It is necessary to remark this last circumstance, lest the physician should, at first sight, be deceived, and ascribe that to an inflammatory state of the blood, which is owing merely to an innocent discharge from the *uterus*. As the disease abates, the urine, in common, puts on a remarkable change; it becomes turbid, usually of a yellowish or clay-colour, not much unlike a decoction of Peruvian bark when cold; and deposits a thick yellowish sediment, frequently tinged with a mixture of purple. But the urine is not always so regular in its appearance, for sometimes it will greatly vary: however, in general, when a crisis is forming, a diligent observer may perceive plain indications of it in the urine. When the distemper ends unfavourably, the urine seldom changes, but continues pretty much the same to the last.

The *lochia*, or usual discharges after delivery, commonly lose their florid complexion, and diminish in quantity; but if the disease goes off soon, the natural flow generally returns. Sometimes, indeed, there seems to be

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be very little change made, with respect to the flow of the *lochia*. The discharge will, now and then, appear quite black.

The patient, in general, does not complain so much of want of milk, during the progress of this disease, as to prevent her suckling her child; however the contrary will sometimes happen, especially if it be very violent, or a *diarrhoea* attend and the stools be thin and watery.

Pain of the head is common to most fevers, and although, in this malady, as observed above, it be among the first symptoms, yet it is attended with this peculiarity, that it seldom is accompanied with any *delirium*, through the whole course of the disease; unless perhaps a few hours before death. Nay, sometimes the patient will retain her senses to the last, which, considering the violence of the disorder, is very wonderful. Perhaps it may be owing to the rapid progress the distemper generally makes, when it proves fatal; so that there is not time for that change to be made in the brain,

as in many other fevers of longer duration : besides, the seat of this disorder is never in the head, but always confined within the trunk of the body.

The blood, when ordered to be taken away in this disease, was generally fizy, with a quantity of yellow *serum*. I do not remember ever seeing the blood in a dissolved state.

I have not remarked any precise time, or critical day, that nature takes for the termination of the disease : but she endeavours to relieve herself by three different ways ; by a *diarrhoea*, by urine, and by sweat. A *diarrhoea* is the chief way by which, as far as I have observed, she is able completely to extricate herself ; and this she often attempts from the beginning of the malady. The wife of FAREHAM, for example, was relieved from her disorder in forty-eight hours, by the kind efforts of nature in producing a *diarrhoea*. And the wife of GARRET was cured in twenty-four hours, by the like spontaneous

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taneous discharge. Of the other two evacuations, sweating is the most effectual.

The reader will probably expect that I should have taken notice here of the *lochia*, as the most probable, and I might say almost the only method by which nature could form a perfect crisis. It is true, that at the beginning of the distemper, as said above, there is frequently more or less of a suppression or change made in the *lochia*, and a return of the same when the disease begins to go off. But I do not remember ever meeting with an instance where this malady was brought to a crisis by a flow of the *lochia*. Neither do I well comprehend how nature can throw off the disease this way, any further than by diminishing the quantity of blood, in the same manner as an hemorrhage at the nose, or bleeding at the arm would do. But a discharge of blood alone does not appear, to me at least, sufficient to remedy the evil. Nor does nature make use of this way either to cure or prevent the disease; if she did, it would hardly follow so soon after that
copious

copious discharge of blood, which succeeds every delivery. The suppression of the lochial discharge seems to be in consequence of the disorder, and the return in consequence of its abatement. This may probably be owing to a spasmodick constriction of the uterine vessels occasioned by the pain within the *abdomen*, during the disease, and to a relaxation of them by its cessation. Just in the same manner as may be observed, by ocular demonstration, in any large fresh external wound. For if an inflammatory disposition seize the vessels going to the part, the discharge will become thin and ichorous; but as soon as the inflammatory constriction of the vessels is removed, by means of proper evacuations and a cooling regimen, the discharge becomes immediately more free, and better conditioned. Be this, however, as it will, the truth is, as far as I have been able to discern, that neither the *lochia*, nor even the *uterus* itself, are primarily affected in this disease, but only suffer by consent; the same as the bladder, or any other neighbouring *viscus* might do. The reason of this assertion will be explained
more

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more fully, in its proper place, when we come to treat of the causes of this disease.

It is almost needless to remark that this fever must, of course, be complicated with any disorder that the patient might happen to labour under at the time of child-birth. The chief that I have met with in this way, of any consequence, hath been the *phthisis pulmonalis*. If any disease hath taken its immediate origin, as it were, out of the puerperal fever, and been combined with it, it hath been the peripneumony. I have met with several instances of this kind.

As to the miliary fever, so common among lying-in women, it hath no connexion at all with the puerperal fever; and when it doth happen to be joined with it, I suspect it must generally be owing to an over-heated room, a warm regimen, an unseasonable use of cordials, or heating medicines. The puerperal fever is a disease *sui generis*, of a nature peculiar to itself; and as simple and regular in its appearance, for the most part, as any distemper incident to the human body. Info-
much

much that it is a matter of no small surprize, that physicians in general should have either overlooked it, or have been so irregular and confused in its description.

This fever, as to the time of its duration, will vary, according to the violence of the disease, the manner of treatment, and the time of the patient making her complaints known. In general, if it ends favourably, it may terminate in three, four, or five days from the time of complaining. The wife of LAWSON had her fever terminated even in twenty-four hours, by purging her with the *sal catharticus amarus*, notwithstanding the pains of the *abdomen* were very severe, and the pulse at one hundred and thirty-six. What is here to be understood by the word terminate, is no more than that the pains cease, the fever abates, and the patient is out of danger. I do not mean that the sick person is able, in that time, to get up and walk about, as if nothing had happened. Undoubtedly she must require some time afterwards, to recover her strength; and even the weakness, from the preceding labour would demand

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demand that, exclusive of this intervening malady.

When the disease resists the efforts of nature, and baffles the assistance of art, it generally proves mortal, as far as I have observed, on the fifth, sixth, seventh, eighth, ninth, tenth, eleventh, or twelfth day, after delivery; the day on which the delivery happened, not being included. And this rule, as to time, I shall attend to through the whole of this discourse, unless where it is otherwise expressed. In this opinion I am supported by GALEN. "*A quo die, inquit, mulier pepererit, ab eo numerare incipias, non à quo cœpit febricitare: nam aliquæ secundo tertiove die, postquam pepererint, in febrem incidunt, atque ab eo plerique futuram crissim enumerant. Verùm res secus habet; quum oporteat à die, quo fœtum edet, enumerationem exordiri*."

And this obvious reason may be assigned for it, namely, that the very hour of delivery can always be exactly ascertained; whereas the time of attack is often various, and uncertain. Sometimes,

^a In Prognostic. Charter. Tom. viii. pag. 668.

indeed, the disorder may be protracted to a much longer period; but then it generally either begins later than common, or is attended with some particular circumstances. I have remarked that a *diarrhoea* coming on either at the beginning or afterwards, and continuing through the whole course of the disease, will sometimes rather tend to prolong than quicken the time of death. The wife of LINER, for instance, had a *diarrhoea* from the first, which continued, at intervals, to the last, and she survived till the eighteenth or nineteenth day after her delivery.

Before death, there is seldom that change made in the eye and countenance which happens in most other fevers, unless just at the very last; and perhaps for the same reason as given above ¹. Nor do the teeth, in general, collect that brown or blackish *sordes* which is so observable in many fevers. A *delirium*, I have observed before, seldom attends, and the same may be said of the hic-cough and *subfultus tendinum*.

¹ Page 11.

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The pain of the *abdomen* generally abates, or entirely ceases, for some hours before death; but sometimes the patient expires in great agonies.

The disease happens at all times of the year, and is incident to women of all ages after delivery, as well to those who have had many children, as those who have had few. Such women as have suffered great hardships, or exerted their strength beyond measure, during gravidity, seem to be more subject, to this malady, than others who have gone through that state with more ease, and tranquillity.

Having thus given a general description of the disease, I will collect into one point of view what I look upon to be its chief pathognomonic symptoms, or characteristic marks. These are, an acute pain and great foreness, over the lower part of the *abdomen*, attended with a fever, and commonly a pain in the forehead, happening soon after delivery. Although these signs are sufficient, in general, to distinguish it from all other diseases, yet it may be necessary to particularize those with

which it hath the greatest affinity, and mark out some of their chief distinctions.

1. It may be distinguished from *after-pains*, by the fever; by the exquisite tenderness of the belly, and the pain not being periodical, but continual.

2. From the *milk-fever*, by the pain and tenderness of the *abdomen*; by the absence of tension or fullness of the *mammæ*, or shooting pains about the breasts, and arm-pits,

3. From the *miliary fever*, by the general sensations of pain and soreness about the hypogastric region, and greater colour in the urine; by a less degree of hurry, and confusion of the spirits; by having no eruptions, nor sense of pricking or tingling in the skin; and if these last should happen, by their giving no relief, which, in the miliary fever, they commonly do.

4. From the *iliac passion*, by the pain not being so fixed to any particular spot, as round the navel or the like; but being more diffused over the *abdomen*, and confined chiefly

to the lower part of the belly; by the patient lying pretty still, and not twisting the body about, or pressing upon the belly with a view of relieving the pain; and lastly, by a *diarrhoea* either attending, or the body being easily soluble by cathartics.

5. From the *flatulent colic*, by the attending fever, the abdominal pain and soreness, and by the pains not moving about from one part of the intestinal canal to another.

6. From an *inflammation of the uterus*, by not having the sensation of a weight and tumour, and a continual burning, throbbing pain, in the region of the *uterus*, extending to the adjacent parts.

HIPPOCRATES distinguisheth an inflammation of the *uterus*, by the following signs:

“ Ην φλεγμαίνεται ἡ μήτηρ, φαύεται. Ην δέ τι σφακελίζει καὶ παλιγοποιεῖ, πῦρ ἔχει ἐξῆ, καὶ μέγα, καὶ φρίκη σκληρὴ τὰ ἀμφὶ τὰ αἰδοῖα, ἐκπάγλως τὸ αἰσθάνεται, καὶ δάκνεται, καὶ ὀρμαὶ καὶ εἴ τις ἐπατρήσει τῷ δακτύλῳ, καὶ αὖθις κάκιον ἔχει καὶ ὀδύρεται, καὶ τὴν κεφαλὴν ἀλγεί, καὶ τὸ βρέγμα, καὶ αἰχλὺς, καὶ ἰδρῶς μετωπιδάιος, τὰ ἄκρεα ψύχονται καὶ

καὶ τέτρεμαίνουσι, καὶ κῶμα ἔχει ἄλλοτε, καὶ ἐσα-
 κέειν ἐκ ἐθέλει, οὐδὲ ἡ ὑστέρα ἐνεργεῖ· ἀσιτίην πολ-
 λήν, καὶ σῶμαχος ἐπ' ἀμύπαν εἰρύεται τὴν τροφήν
 καὶ ἡ κοιλίη, καὶ βοῶν, καὶ ἀναίσσει, καὶ ὀδυῖται
 τὸ, τε ἥτρον, καὶ τὰς βιββωνας, καὶ τὰς ἰξύας, καὶ
 παραφύσιαν, καὶ ταχὺ θνήσκουσιν: *Si inflamma-
 tus fuerit uterus, vellicatur; quod si quid cor-
 ruptum fuerit et recruduerit, febris corripit
 acuta et magna, horrorque durus partes circa
 pudenda; ferociter afficitur, mordetur, et con-
 citatur. Ac si quis digito contigerit, rursus
 pejus habet, et pungitur, caput et sinciput do-
 let, tum caligo, tum frontis sudor adest, extre-
 ma perfrigerantur ac tremunt, interdum etiam
 sopor occupat, neque audire potest, neque ali-
 quid uterus efficit; multum est cibi fastidium,
 neque stomachus, neque ventriculus omnino cibum
 attrahit; vociferatur, prosilit, dolet pubem, in-
 guina, et lumbos, et occultos pudendi locos, ce-
 leriterque intereunt¹.*"

Commentators differ with respect to the true meaning of the word ψάυεται. CHARTER-
 TERIUS, as we see above, translates it *velli-*

¹ De Mulier. Morb. lib. 2. cap. 50. Charter. tom. vii, pag. 827.

catur;

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catur; FOËSIUS hath it *contrahitur*. The common meaning of the word referreth to the touch; and HIPPOCRATES generally useth it in this very sense, as may be observed in FOËSIUS's *Oeconomia*, under the letter Ψ . I rather suspect, therefore, that there is a corruption in this part of the text, and that the true interpretation should be thus: *Si inflammatus fuerit uterus, tactui se ostendit*: an inflammation of the *uterus*, may be known by the touch. Almost all authors, who have described an inflammation of the *uterus*, confide in the touch as much as any thing, in order to discover the disease. Indeed the swelling of the *uterus*, and the sense of heat, which are inseparable from an inflammation of it, are the grand and leading ideas, and contain, of themselves, a general though short description of the disease; and therefore are the likeliest to be first introduced by any author who is about to describe such a malady. After this, the more minute and particular parts of the description follow, as in the text.

The word $\sigmaκληρή$ also doth not interpret well with $\sigmaπίκη$: *horror durus* is an odd, and

unmeaning expression. It would read much better, and be more descriptive, were it written *σκληρά*, and made to agree with the latter part of the sentence, in the manner that Fœsius hath rendered it: *σκληρά τὰ ἀμφὶ τὰ αἰδολὰ*: “*partes circa pudenda dura sunt.*”

I will take the liberty to give my own interpretation, of the whole passage, and leave every one to do the same. *Si inflammatus fuerit uterus, tactui se ostendit. Quandoque autem in eodem aliquid corruptum fuerit et recruduerit, febris acuta et vehemens cum horrore nascitur, et quæ circa naturalia sunt, indurescunt. Quam maximè afficitur, sensus quasi mordendi est, et cum impetu morbus accedit; digito verum admoto, iterum res pejus se habet, et aliqua quasi puncta sentiuntur. Dolor et capitis, et sincipitis adest. Oculi caligant, sudorque è fronte prorumpit. Extremitates partium membrorum frigent, et intremunt. Sopor quoque interdum urget; neque facultas audiendi est, neque utero vis ulla inhaeret. Cibi fastidium multum est, nec stomachus, nec ventriculus omnino alimenti tenax. Vehementer ægra clamat, subito confurgit; dolent et pubes, et inguina, et lumbi,*

lumbi, et naturalium partes interiores, celeriterque moriuntur.

From AËTIUS we learn, not only the general symptoms of an inflammation of the uterus, but those also which are peculiar to the different parts of that organ, when they happen to be principally affected. “ *Uteri inflammatio (inquit) ob multas causas contingit. Indicant hanc muliebrium locorum, pubis, imi ventris, ac lumborum dolores ardentes. Et si digitus in os uteri submittatur, occurrit ad contactum, durum, clausum, fervens, ac retractum, præsertim si in ipso, aut in collo fuerit inflammatio. Nam ubi cavitas, aut fundus uteri inflammatur, imi ventris dolor ostendit, ut ne contactum quidem foris admittat. Et plerunque uterus ad inflammatum locum retrahitur, atque hanc ob causam os, et collum ejus, avertitur. Differt autem ab ea quam supra uteri retractionem appellavimus, quia in inflammatione febris est acuta, et ardor intensus. Si verò posterior ipsius pars inflammata fuerit, dolor circa spinam magis hæret, et, compresso intestino recto, stercorea detinentur. Anteriorè autem partè inflammata, urinæ difficultas, aut stillicidium, consequitur ex compressa*

D

vesica,

vesica, præsertim si dolor pectinem affligit. At ubi obliquos laterum locos inflammatio occupavit, inguina distenduntur, et crura gravantur, ac ægre moventur. Invalescente verò inflammatione, febres accedunt, dolor capitis, stomachi afflictio per consensum, imi ventris tumor, ardor, distentio, gravitas coxarum, lumborum, præcordiorum, inguinum, femorum, horrores discurrentes, ac pungentes, pedum torpor, genuum perfrigeratio, extremarum partium exudatio, pulsus parvi ac densi, animi deliquium, exolutio. In augmento verò etiam singultus, dolor tendinis, colli, maxillarum, sincipitis, oculorum præsertim in fundo. Urinaque ac stercoreum recrementa supprimuntur. Et inflammatione adhuc magis acutâ, febres augescunt, delirant, dentibus frendunt¹."

These marks taken collectively, and compared with the genuine and constant symptoms of the puerperal fever, will sufficiently distinguish the one disease from the other.

7. From the *cholera morbus*, by the costiveness that generally attends the puerperal fever,

¹ Aëtii Medic. Græc. &c. Per Janum Cornarium. Lugduni, 1549. pag. 1008.

at the beginning ; and if it should commence with a *diarrhoea*, it is easily distinguished from that of the *cholera*, by its not being so sudden, so painful and profuse, nor sinking the patient so much ; but, on the contrary, giving generally immediate ease, strength, and spirits. Neither is it attended with that violent degree of vomiting as the *cholera*, nor with those spasms and contractions in the limbs. Besides, the *cholera* is confined chiefly to the close of summer and beginning of autumn, as regularly, says SYDENHAM¹, as swallows come in the beginning of spring, and cuckows towards midsummer, whereas the puerperal fever happens all the year round. In a word, the complaints coming on soon after delivery, the pain and foreness being diffused over the hypogastric region, together with the general appearance of the disorder, will, at once, distinguish it from the *cholera morbus*.

¹ Sect. iv. cap. 2. pag. 175.

C H A P. II.

Of the Prognostics.

THERE is scarcely any disease, in the history of Physic, where delays are more dangerous than in the puerperal fever. And yet, unfortunately for the patient, there is no disease which is more apt to be neglected, or trifled with; or, what is worse, injudiciously treated, through the ignorance of the lying-in woman, and her attendants.

The patient, as hath been observed¹, frequently mistakes her complaints for after-pains, and thinking they will gradually go off, neglects to make her case known and apply for proper aid. The by-standers fall into the same error, or taking it for some colic complaint, keep the patient hot, ply her plentifully with spices and caudle, and give her spirituous waters or warm medicines, under the notion of cordials. By these means

¹ Page 2.

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the malady is greatly increased, makes quick ravage, and becomes, in a short time, inevitably fatal.

Nurses, and women in general, seem, in a great measure, ignorant of such a disease as this being incident to lying-in persons. I dare venture to say that the very name of it is as much a stranger to most of them, as if no such malady existed; and yet there never was a time when this disease did not exist. The consequence is, that knowing no danger, they fear none; whereas, on the contrary, they should be taught to dread the name of puerperal fever, as they would the name of pestilence, or plague; for I fear that the one destroys not more than the other. Like a fierce and untamed enemy, the one spreads his hostile banners in open day, and feasts on carnage and destruction, till, glutted with slaughter, he himself sinks down and dies! But the other, like a secret revengeful foe, stabs in the dark to the very vitals, and though he kills one only at a time, yet he is privately slaying every day, and never satiated; thus making up by length of time, what the other does by a sudden devastation!

They

They should be taught to know, I say, that pain and foreness of the belly, coming on soon after delivery, unless speedily relieved by judicious assistance, will prove mortal in a few days ! They should be taught to know that these complaints are attended with a fever, which is called the puerperal fever.

I cannot say how it may be with other physicians, but, for my part, I never hear a childbed-woman complain of a pain and tenderness of the *abdomen*, but I look upon her disorder with as much anxiety and circumspection, as if I knew her actually labouring under an inflammation of the bowels, or a *hernia* with a strangulated gut ; and think it my duty to be as expeditious in relieving the one complaint as the other. I have dwelt the longer on this head, in order to show the necessity there is, in this disease, of the physician being made acquainted with its appearance in time ; and to apprize the patient and her attendants, of the great and imminent danger attending a neglect. Let us, therefore, return to the prognostics.

By

PUERPERAL FEVER. 31

By carefully attending to the pulse and respiration, much may be learnt respecting the fate of the patient labouring under this disease. If the pulse be very quick, and the respiration frequent and small, it portends great danger. If, on the contrary, the pulse become slower, the breathing more free and full, it is a certain sign of a change for the better. The degrees of these are to ascertain the degree of danger, or safety, of the patient. A quick pulse, singly considered, is, at all times, a dangerous symptom; and the more so, if very weak and small. The contrary indicates safety. If the pulse does but once begin to become daily slower and slower, as from one hundred and twenty-eight to one hundred and twelve, then to one hundred, or the like, it is to be esteemed as one of the best signs. But if it continue at the same number, or rather quicken, it always threatens danger; or if it be found changeable, being one day quicker and another day slower, it is ever to be suspected. Nay, so infallible is the beat of the pulse, with respect to number, that though all the other symptoms should abate, and the disease seem to be gone off,

off, yet if the pulsations do not decrease in proportion, a relapse, or some other disorder, is to be feared.

A *diarrhoea* coming on at the beginning, if followed by a slower pulse, prognosticates safety. But if, after evacuations by stool, whether procured by nature or art, the pulse should not become slower, it is to be reckoned as one of the most dangerous symptoms. A person seized with this fever having had a costive body, during pregnancy, is threatened with more danger than if the belly had been regular.

If the disease be neglected in the beginning, it is frequently mortal; but if assistance be called in due time, it often easily yields to medicine.

When signs of the malady come on immediately from the time of delivery, it is commonly productive of evil.

If violent pains shoot across the epigastric region, through the ribs to the back, with a difficulty in breathing, and a quick pulse,
the

PUERPERAL FEVER. 33

the disease will generally prove mortal, within the seventh or eighth day, from the attack.

Want of sleep is not a favourable symptom. When the patient turns herself, and lies upon her side, it signifies a change for the better.

A whitish, moist, and soft tongue, is no bad sign; but when it begins to be clear, it indicates safety. When the tongue becomes dry, and rough, and changes its colour, let the physician be attentive to the fate of his patient.

A fixt colour in the cheeks, with a livid hue, portends no small danger.

Partial sweats confined to the face, neck, and breast, indicate no good. When they are general, and attended with turbid urine and a slower pulse, the physician may encourage his patient.

A fresh flow of the lochia is an eligible sign.

E

If

If the urine continues crude, and of the same colour as at the beginning of the disorder, it prognosticates ill. Turbid urine, of a clay or yellowish colour, with a thick sediment, tinged with purple or red, is a token of recovery.

A cool soft skin, as of one in health, unless it be joined with other favourable marks, is only a flattering symptom.

A frequent discharge, by vomit, during the course of the disease, of a green or black colour, is generally mortal. Death is speedily to be expected, when the pulse becomes so quick and weak as scarcely to be numbered, when the patient throws up every thing that is given her, when the stools flow involuntarily, and a cold clammy sweat hangs on the extremities.

CHAP. III.

Of the Dissections.

I WILL make, a few general observations, by way of preface. At the time of death, or some hours after, the whole *abdomen* was commonly found much swelled, but soft, and no way discoloured, unless by the veins which sometimes branched upon it. At other times, it was not in the least tumefied, but had rather the contrary appearance, being sunk down and flat: this seems to happen mostly in those cases where there hath been a profuse *diarrhoea*, during the course of the disease. Upon cutting into the *abdomen*, the *membrana adiposa*, abdominal muscles, and *peritonæum*, were always found in a sound state, except where it is otherwise expressed. All the bodies were opened about twenty-four hours after death. The manner in which I propose treating this part of my discourse is, first to give a general history of the case, and then the dissection. In doing this, I shall confine myself entirely to the symptoms of the disease, or such other circum-

stances as might happen to the patient before delivery ; and which may tend to illustrate more fully the nature of the case. I shall not, at present, make any observations upon the morbid appearances after death, but leave the reader perfectly free to draw his own conclusions.

C A S E I.

The patient, who is the subject of this dissection, had an easy labour, and this was her second lying-in. The pains were severe all over the lower part of the *abdomen*, which was affected by the slightest touch, but particularly in the right iliac region. A looseness attended from the beginning, and the discharge was fetid. A vomiting also came on, at the same time, first of a green, and afterwards of a blackish colour. Both the purging and vomiting continued to the last. The urine was, at the beginning, high coloured ; but afterwards changed to a more brown colour with a crude sediment. The pulse, from the first, was at one hundred and thirty-six and weak, and before she died, so quick and small as scarcely to be numbered.

There

PUERPERAL FEVER. 37

There was a difficulty in breathing, owing, as she said, to the acute pain in the *abdomen*, which was greatly increased every time she drew in her breath. The tongue was white, and there was much thirst, and fever. She had a pain in her head, and could get no rest. The day before she died she thought herself much better. She used to complain of a pain in her belly, for some time before she was delivered, but was, otherwise, in health. She was strongly prepossessed with a notion, for a long time before delivery, that she should die in childbed. There was no hiccough, nor *subsultus tendinum*; neither was she delirious, but retained her mental faculties perfectly to the time of her death. The disease proved mortal on the seventh day after delivery.

DISSECTION.

The *abdomen* was not swelled. Upon exposing the *viscera* a quantity of fetid liquor discharged itself, which was found floating among the intestines and in the *pelvis*. The *omentum* was greatly inflamed, and partly in a mortified state. On the right side, a little
below

below the short ribs, part of the *omentum* was thickened, and very much gangrened, and, when scarified with the knife, discharged a quantity of stinking liquor, which seemed to be contained in cells. The intestines were not distended with air, as is generally the case in this disease, but adhered to each other as if they had been slightly glued together. Small portions of a whitish or yellow substance, seemingly fat, stuck here and there between the folds of the intestines, as if they had been pasted to them. The intestines were in general inflamed, but particularly on the left side of the *abdomen*, where there also seemed to be a tendency to a gangrene. The *vagina*, and external parts were unhurt. The *uterus* was perfectly sound, and contracted into a small compass, and lay concealed within the cavity of the *pelvis*. Nothing remarkable was observed in any of the other abdominal *viscera*. The contents of the *thorax* were not examined,

CASE

CASE II.

The subject, of this dissection, was twenty-one years of age, and this was her first child. She had a safe and easy labour. She was a healthy woman, excepting a slight pain in her left side, and a little difficulty in breathing, which she complained of, for a month or six weeks before she was brought to-bed. The disease began, on the second, or third day after delivery, with a violent pain and tenderness all over the *abdomen*. These symptoms were accompanied with a fever, and severe shooting pains across the pit of the stomach and sides. There was a cough and difficulty in breathing. A vomiting attended, from the beginning, first, of a green, and afterwards of a dark coloured matter; pretty much the same, as was afterwards found, in the stomach, upon dissection. The vomiting continued till death. At first the belly was costive, but afterwards loose, and the stools were somewhat black and fetid. The *abdomen* was a good deal swelled. The urine was of a brown colour, and had a crude brown

brown sediment. Once the sediment changed to a whitish colour, but returned again to a brown. The tongue was dry, and the thirst great. The pulse at first beat one hundred and forty in the space of a minute, and was weak, but, before death, it reached one hundred and sixty, and was scarcely to be felt. Profuse sweats came on at the beginning of the disease, but as it increased they went off. There was no *delirium*, *subfultus tendinum*, nor hiccough. She died, in great agonies, on the eleventh day after delivery.

DISSECTION.

The *abdomen* was much tumefied. Upon penetrating into its cavity, there rushed out a quantity of fetid air, and a liquor, of the same odour, mixed with *pus*. The *omentum* was found in a gangrenous state and thin, having lost the greatest part of its fat. The mortification had particularly seized the inferior portion of the *omentum*, which was dragged down, towards the left side, so as to reach into the *pelvis*, and, by the distention of the inflated intestines underneath,

was

PUERPERAL FEVER. 41

was pressed close, in that part, against the *os pubis*. The stomach and intestines were greatly distended with air, particularly the former. The *cæcum* was also much inflated, but contained little else than air: the few excrements, that were in it, were thin, and of a dark colour. In the stomach was found a quantity of thick, blackish fluid. The vessels on the surface of the intestines and stomach, were, in different places, distended with blood. The intestines slightly adhered to each other, as if pasted together, and small parcels of a fatty substance, of the same kind as those mentioned before, stuck fast, in various places, betwixt their several convolutions, and, in some measure, glued them together. The *uterus* was in a sound state, and lay hid, within the *pelvis*. Both lobes of the lungs were inflamed, and somewhat black, particularly in their most dependent part. No alteration was found in the *pleura*. Nothing particular was discovered in any of the other *viscera*.

F

CASE

C A S E III.

The person, who is the subject of the present dissection, was thirty-four years of age, and this was her second childbirth. She had an easy labour, and made no complaints, either before or after delivery, till the third day. She began with a shivering, succeeded by a fever. This was followed by an acute pain all over the *abdomen*, but especially over the region of the stomach, short ribs, and down to the spine. A shortness of breath, and vomiting attended. The discharge was green. The belly was neither costive, nor loose. She preserved her senses entire. No hiccough, nor *subsultus tendinum* came on. The disease terminated fatally, on the sixth day, after childbirth.

DISSECTION.

The belly was greatly swelled. The skin of the whole body was of a tawny, or yellowish hue. Upon viewing the abdominal contents, the *omentum* was found greatly mortified.

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fied. A yellow, fetid liquor, with a mixture of *pus*, filled the *pelvis*, and floated among the intestines. The whole intestinal canal was distended with fetid air, but particularly the great flexure of the *colon*. A general inflammation appeared scattered, in various parts, over all the intestines. The stomach was not distended with *flatus*, but lay concealed under the liver, which was of an extraordinary magnitude. It had pushed itself, as it were, high up into the cavity of the *thorax*, and carried the diaphragm along with it; to which it adhered so firmly, in its whole convex surface, as not to be separated. In the right lobe was found a very extensive abscess, filled with hydatides, swimming in a fluid which was void of all smell. The hydatides were perfectly round, and of various magnitudes, from the size of a hen's egg, to that of a hazel-nut. They were composed of a thick gelatinous substance, somewhat of a brown colour, but pretty transparent, and so firm as not to be destroyed by handling. The rest of the liver appeared to be quite sound. The gall-bladder was pretty large, and full of bile. The lungs were of a remarkably small size, dense, and livid; they

did not adhere to the *pleura*. The *uterus* was quite contracted, and lay concealed within the *pelvis*: its substance was somewhat thicker than ordinary, but of a firm texture, and perfectly sound.

C A S E IV.

This was her second lying-in, and she was about twenty-eight years of age. She had complained of pains in the *abdomen*, for some time before delivery, and told her companions afterwards that she had got a hurt in her belly, but did not describe the manner how, or the particular part where she had received the injury. However, she made no complaints to her physician till about the first or second day after delivery, when she was seized with a fever, and severe pain and foreness all over the hypogastric region, attended with a vomiting. The matter thrown up was at first of a yellow colour, but in the progress of the disease changed to a green. A *diarrhoea* came on at the same time, which continued till death. The belly was never swelled, but, in a manner, quite emaciated.

The

PUERPERAL FEVER. 45

The pain ceased, a day or two, before she died. The disease proved mortal on the eighteenth day after delivery.

DISSECTION.

The *abdomen* was not tumefied, but quite shrunk. The *viscera* being exposed to view, the whole *omentum* appeared in a gangrenous state. The lower part reached down into the *pelvis*, and was entirely mortified, and had a most offensive smell. Its under surface lay upon the *uterus*, its upper stuck, as if glued, against that part of the *abdomen* near which the *musculi pyramidales* take their origin, or rather a little more to the left side. It had tintured the external surface of the *uterus* with a variety of dark brown spots, so as to make it appear variegated, or marbled; and had infected with an actual gangrene the *peritonæum* and muscular flesh, at the place, above the *pubis*, just now mentioned. It had also made an impression, of the same nature, upon the *ovaria*, and Fallopian tubes. The *omentum* likewise adhered closely, through the whole compass of the *abdomen*, to the *peritonæum* above, and the intestines below,

as

as if pasted to them. On the right side, in the iliac region, an abscess had formed in the substance of the *omentum*, which, being opened, discharged a quantity of purulent matter. A general inflammation had spread itself, over the coats of the intestines, in various parts, and in some places they seemed to be changed to a dusky colour. The substance of the *uterus*, notwithstanding the discoloration on its surface, upon dissection, appeared altogether firm and sound; it was properly contracted into a small compass, and lay sunk within the *pelvis*. There was no fetid water, nor any other liquor, found within the cavity of the *abdomen*, except a very small quantity which moistened the bottom of the *pelvis*. The intestines, the *omentum*, and all the other parts within the *abdomen*, were remarkably dry; much more so than in any other body, which I have seen opened, affected by this disease. Neither was there any kind of *flatus* confined within the cavity of the *abdomen*, or intestines. Yet the parts diseased, in this subject, were contaminated with such a gangrenous stench, as scarcely to be endured.

C A S E

C A S E V.

She was thirty-three years of age, and made no complaints before delivery. She was safely brought to-bed, and had an easy labour. This was her seventh, or eighth child. The disease began on the third day after childbirth. There was a violent pain, and acute foreness all over the *abdomen*, accompanied with a fever. Severe pains also shot across the region of the stomach, and down through the sides. A perpetual pain affected the head. She had, too, a difficulty in breathing, and a frequent cough. The tongue was dry, and had a brown streak down the middle. She had a purging, from the first, which continued till death; and, before that fatal period, a vomiting succeeded, but no hiccough, nor *subfultus tendinum*. Her breath was very fetid, and of so acrid a quality as to cause a sharp discharge from the nostrils, for a week or ten days together, of a person who happened to receive part of it by the nose, as she was attending her. She did not survive the seventh day after her delivery.

livery. She retained her senses perfectly to the end, and expired in great agony.

DISSECTION.

The *abdomen* was swelled. Upon laying open its cavity, the *omentum* appeared very much inflamed, and somewhat gangrened. All its fatty substance was nearly destroyed, seemingly by suppuration, and little remained, of that *viscus*, except a thin membranous web with pretty large vessels, branching over it, distended with black blood. In some places this thin web was worn, as it were, quite through; being found perforated with holes. A yellow fetid liquor mixt with *pus*, and minute pieces of a fatty substance, were found in the cavity of the *abdomen* and *pelvis*; but mostly in the latter. The stomach and intestines were greatly inflated, and had their capillaries, here and there, distended with blood. The latter slightly adhered to each other, and had the same sort of fatty substances pasted, in divers places, betwixt their several convolutions, which have been described above. The lungs were found in an
inflamed

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inflamed state. The *uterus* was quite sound and contracted, and lay concealed within the cavity of the *pelvis*. Nothing remarkable was observed in any of the other viscera.

C A S E VI.

This patient made no complaints before delivery, but after her death I learnt that, during her maiden state, she had been subject to profuse, and dangerous, uterine hemorrhages. Her age was twenty-six years, and this was her second lying-in. She was safely delivered about ten o'clock in the morning, and was seized the next day about seven in the evening. She complained of a violent pain and great foreness all over the *abdomen*, from the *os pubis* up to the *cartilago ensiformis*, attended with a fever. Though the pain was thus general, yet some particular parts were affected more than others. The pit of the stomach was the chief seat of pain, the next was in both iliac regions tending upwards to the short ribs, and the other was directly above the *symphysis* of the *os pubis*. No rigor, or sense of cold, preceded the attack.

G

The

The pain, at the pit of the stomach, struck across the short ribs, and down into the back. The belly was very little swelled at the beginning, but a good deal so before death; yet always remained soft. She had no pain in making water. There was no sense of heat, or throbbing, about the region of the *uterus*, or *vagina*. The disease began with a *diarrhoea*, and the discharge was fetid, and frothy. During the whole state of pregnancy, her body was always very costive. There was a pain in the head, principally in the fore part. Her thirst was very great. The tongue kept moist, and white, till the day before she died, when it became red and dry. Her pulse from the beginning was very weak, and beat at the rate of a hundred and sixty times in a minute; and at length became so quick, and small, as not to be counted. The skin was temperate. Sometimes general sweats broke out, but in common they were partial; being confined chiefly to the face, neck, and breast. The *lochia*, for the first two or three days of her disorder, were of a proper colour, and in sufficient quantity; afterwards they diminished in both, but never quite left her till she died. She had a very
small

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small flow of milk. Her breathing was difficult: the inspirations were very quick and small, and increased her pains. She had no spitting, nor complained of any cough, till she was asked very particularly about that circumstance, and then she said she had a little incitement, to cough, now and then. The urine at first was very high coloured, which I attributed to the flow of the *lochia*; for as they diminished it changed to a brown colour, attended with a crude sediment, both which continued till death. She got no rest till the second or third night, and was disturbed out of her sleep by dreaming that her physician came to her bed-side, and bade her put out her tongue, the impression of which was so strong, that she immediately put out her tongue, and awoke; her slumbers in general were short, and interrupted by dreams of various kinds. On the fourth day, of her disorder, she vomited slightly twice; the discharge was small in quantity, and of a dark colour: she vomited no more after this except once, which was near the time of her death, and what she threw up was very small in quantity, and of a dark yellow. I was much surprised to find that every thing she took staid

with her, and that no continual vomiting came on, as is usual in this disease, when it proves fatal, which I could not account for till the body was opened; when the stomach was found so greatly distended as to be rendered, in a manner, quite paralytic. She complained much of wind in her bowels. The alvine discharge, at the latter end of her disorder, was not so offensive in smell as at first. It was of a dark yellow colour, very much resembling the liquor that was afterwards found, in the stomach and intestines, upon dissection. She retained her senses to within a very few hours of her death, when she became somewhat delirious. The teeth contracted no foulness, neither did the eyes suffer that change which is observable in many other fevers. No hiccough, nor *subsultus tendinum* came on. The day before she expired, the pains entirely ceased, and she thought herself better; but this was only a prelude to a general dissolution: for the shortness in breathing increased, the pulse became weaker and weaker, a cold sweat supervened, and closed the scene on the sixth day after delivery!

DISSECTION.

The body was very much swelled. Branches of veins appeared on each side, running from the groin upwards, and were of a lively green. Upon displaying the contents of the *abdomen*, the small intestines were seen greatly distended with air. On the right side of the *abdomen* they appeared of a silver colour, with their capillaries, filled with blood, scattered here and there over their surface. On the left side they had lost a good deal of that silver brightness, had put on a dusky colour, and had their coats more thickened on this side than the other. That part of the intestinal canal lying in the centre of the *abdomen*, immediately above the *os pubis*, laboured under a recent circular inflammation, of about four fingers breadth diameter, but without any excoriation, or loss of substance, and a quantity of *pus* was found adhering to the integuments that lay over it. No appearance was to be seen of the liver, or *colon*; those two *viscera* being quite hid by the great inflation of the small intestines, and stomach.

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Dis-

DISSECTION.

The body was very much swelled. Branches of veins appeared on each side, running from the groin upwards, and were of a lively green. Upon displaying the contents of the *abdomen*, the small intestines were seen greatly distended with air. On the right side of the *abdomen* they appeared of a silver colour, with their capillaries, filled with blood, scattered here and there over their surface. On the left side they had lost a good deal of that silver brightness, had put on a dusky colour, and had their coats more thickened on this side than the other. That part of the intestinal canal lying in the centre of the *abdomen*, immediately above the *os pubis*, laboured under a recent circular inflammation, of about four fingers breadth diameter, but without any excoriation, or loss of substance, and a quantity of *pus* was found adhering to the integuments that lay over it. No appearance was to be seen of the liver, or *colon*; those two *viscera* being quite hid by the great inflation of the small intestines, and stomach.

stomach. This last *viscus* was inflated to an amazing degree. It came sweeping down from under the ribs, of the left side, and filled the whole *scrobiculus cordis*. It pressed so strongly against this part, that, when the integuments were divided, it rushed out, and being confined by the ribs on each side, formed the appearance of a bladder filled with air, of a triangular shape, its *apex* pointing upwards. The winding of the intestines ran up close to the base of this triangle, and pressed against it. The *omentum* was drawn, or pushed, quite up, and lay rumpled upon the great arch of the *colon*. It was very thin, little remaining except its membranous part. On the right side, a portion of it, extending from below the short ribs, was highly inflamed, and, in some measure, gangrened. That part, on the left side, which is fixed to the longitudinal scissure of the spleen, was found in the same state. And that portion of the *omentum*, which is connected to the convex side of the upper extremity of the stomach, was also much inflamed. A large vessel, distended with blood, surrounded the great arch of the stomach, like a garland, and sent off branches which spread themselves up-
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on the *omentum*. Minute capillaries likewise ran branching from the *omentum* upon the external coat of the *colon*. Towards the upper extremity of the stomach, on the back part, an inflammation, of an oblong shape, had taken place, spreading about two or three inches. Upon opening the stomach, its *rugæ* were found quite obliterated; it contained a great deal of air, and a quantity of thick liquor, of a dark yellow colour. The intestines did not adhere to each other, neither were there seen any of those portions of fat, mentioned in some of the former dissections, adhering between their various circumvolutions. They contained a great deal of air, and pretty much the same sort of fluid as was found in the cavity of the stomach, only of a thicker consistence. The liver was of a smaller size than common, of a pale colour, as if it had been boiled, and its substance was very tender. The gall-bladder was small, and half filled with thin bile. The *uterus* was less contracted, in this subject, than I have generally observed in these cases, and lay flabby, and loose, in the cavity of the *pelvis*; but, in other respects, it was perfectly sound. The *placenta* had adhered
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to its upper part, and a dark coloured *mucus* lined its whole cavity. Above a quart of yellow liquor, mixed with *pus*, was found in the cavity of the *abdomen* and *pelvis*. Both lobes of the lungs were blackish, and affected with inflammation. ~~A pretty large quantity, of thin bloody liquor, was found in each cavity of the *thorax*.~~ On the left side the lungs adhered, by a few membranous strings, to the *pleura*, near the middle of the *thorax*, towards the spine, but no where else. The *pleura* did not appear to be inflamed in any part. Upon piercing the *pericardium*, a good quantity, of reddish coloured serous fluid, discharged itself. A long polypous concretion was found in the right ventricle, which did not adhere to the sides, but lay entangled among the tendinous fibres of the *valvula semilunares*.

CHAP. IV.

Of the Cure.

§ 1.

I SHALL divide the cure into two parts. Under the former, will be comprehended the more simple method of treatment, and under the latter the more complex.

The patient, at the beginning, is generally costive, having had no stool from the time of delivery. If this be attended with the mildest degree of the disease, a simple emollient opening clyster, will often procure two or three stools, and give immediate relief. If the injection produce no evacuation, it is seldom of any service. In some habits of body, where the bowels are delicate, a medicine of this kind will cause five, or six motions. The great advantage of the clyster is, that it generally causes an immediate discharge, without loss of time, which is a matter of some consequence in this disorder. And if it should not remove the malady, yet it opens

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the way for the more powerful means which are to follow. The chief objection to clysters is, lest their introduction should hurt the parts so lately affected by the labour. This may sometimes be the case, if a great tenderness still remain, or if they should be administered by an injudicious person; but, in general, I seldom hear the patient complain of pain from the use of injections. They are undoubtedly, at all times, rather disagreeable, and may, with great propriety, be frequently omitted.

If the patient do not find herself greatly relieved by this simple treatment, or if a clyster should be thought unnecessary, then recourse must be immediately had to cathartics. A solution, of the *sal catharticus amarus*, in water; the *oleum ricini*; the *tartarum emeticum*; and the *vinum antimoniale*; are what I have found to answer the purpose best. The two former, are the mildest, and must be repeated till they procure a thorough evacuation, without which they are of no use. Of the *oleum ricini*, I generally give one ounce at the first, and half an ounce every three hours afterwards, till
some

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some effect be produced : but the first quantity generally runs through the bowels pretty quickly, which is the great advantage attending this medicine.

When the *tartarum emeticum*, or *vinum antimoniale*, are made use of, they are to be given in small doses, every two or three hours, till they pass through the intestinal canal ; otherwise they will answer no other purpose than to amuse the patient, and deceive the prescriber. For though they might promote sweat, and thereby ease the patient for the present, yet when the disease is violent, it seldom goes off properly without a plentiful discharge by stool. We are to judge of the evacuation necessary to be made, by the quality and quantity of the discharge, the abatement of the pain, and the strength of the patient. It may not here be amiss to observe that, previous to any alvine evacuation, it is proper to inquire of the patient, whether the body be easily soluble or not ; that the nature and dose, of the cathartic medicine, may be more judiciously adapted to the circumstance of the case.

Soon after stools have been procured, the patient generally finds an immediate relief from pain, kind sweats come on, gentle slumbers succeed, and the pulse becomes more calm, and slow. I commonly prefer giving the *tartarum emeticum*, in a liquid state, to the form of a powder; because it is more pleasant to take that way, and the dose can be more easily ascertained. The following prescription may serve as an example of what I mean:

℞ *Tart. emet. gr. iv.*

Aq. pur. ℥vijs.

Syr. caryoph. rubr. ℥ss. Misce.

Hujus cochleare unum, vel alterum, protinus assumendum; interpositisque horis duabus tribusve, idem medicamentum est repetendum, donec alvus aptè responderit.

After the intestinal canal is sufficiently cleared, and the pain abates, a gentle diaphoresis is to be encouraged by such medicines as neither bind the body, nor are heating; both which are very pernicious. This intention seems best answered by small doses of *ipëcacanha*, *tartarum emeticum*, or the
vinum

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vinum antimoniale, combined with a gently dosed opiate, and given about once, or twice, in the course of the twenty-four hours. In the intermediate spaces of time, the physician may interpose the saline draughts of RIVERIUS *. These draughts, in order to be of any service, should be repeated often, and may be given either in the act of effervescence, or otherwise, as the prescriber shall think proper. They may answer several purposes; they may operate as antiseptics, and assist in destroying the putrescence lodged in the bowels; they may also provoke urine,

* The prescription, of this celebrated author, in his chapter on pestilential fevers, stands thus: "*Sal absinthii ad ʒj. in succi limonum recentis cochleari exhibitum.*" But here, in all probability, is a typographical error of ʒj, for ʒj. And what seems to confirm this opinion is, that afterwards the same kind of remedy is again proposed, for the cure of the very same complaint (a continual vomiting) and comprehends a more perfect description of the medicine, than the former, as follows: "*℞ Salis absint. ʒj. succi limonum recentis cochl. j. mixta fuerunt in ipso cochleari, & exhibita.*" *Centur. 1. Obs. xv.* And I meet with the like quantity of alkali and acid, as in this last prescription, ordered in another place of the works of this author. *Centur. 11. Obs. xcix.* The proportion, therefore, which I here mean to recommend, is the quantity of one scruple of the salt, to half an ounce of the juice.

and

and help to quench thirst; and they have this further advantage, that they neither bind, nor heat the body. I have frequently ordered the patient to drink a tea-cup full of chamomile-tea every hour, which answered, I thought, the above good intentions very well; and, at the same time, seemed to quiet any spasmodic constrictions in the bowels, which the patient might labour under, and assisted to keep up a regular discharge through the skin.

If preceding, or during the evacuations above-mentioned, a sickness at the stomach, or vomiting should attend, the patient must, first of all, assist the efforts of nature, by drinking plentifully of chamomile-tea, warm water, or any other diluting liquor, so as perfectly to cleanse the stomach. And then the rest of the cure, must be conducted, in the manner recommended above.

The common drink should be of a mild, cooling, and diluting nature. If the skin be dry and hot, the thirst great, and fever urgent, the liquors may be drunk cold. But if the patient perspire, then they should be
taken

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taken lukewarm. Pure water with a toast in it; barley-water, either by itself, or with the addition of a little nitre; whey made with rennet or vinegar; milk and water; lemonade; a slight infusion of malt*; mint, or sage-tea; are the proper kinds of drink. I have frequently known the patient earnestly desire a draught of cold small-beer, to which I have consented, after qualifying it a little with a toast; and she generally drank it with great pleasure, and seemingly with advantage, finding herself much refreshed by it.

The patient must strictly abstain from all caudle, spices, wine, spirituous waters, heating medicines, and cordials of every kind; whether under the denomination of comforters, strengtheners, revivers, expellers of wind, promoters of the *lochia*, relievers of after-pains, or under any other specious title whatever, which the good women are too apt to bestow upon them, and, thus ignorantly administer to the destruction of the unhappy patient.

* A gallon of boiling water, to a quart of ground malt.

Rest

Rest of body, and tranquillity of mind, are of the utmost consequence to all those labouring under the puerperal fever; because they are always, at such times, very easily affected. They should be kept as free from noise as possible, and should not be disturbed by company. Every piece of ill news, or any other thing that might give them the least uneasiness, or surprise, should be carefully concealed from them, till strength of body, and firmness of mind be sufficiently restored. For the same reason also, too much light is hurtful; the room, therefore, at first should be darkened, and the light be only admitted according as the patient is able to bear it. The same rules should likewise be observed, after every delivery, whether the person labour under a fever or not.

The clothes of puerperal women should be frequently changed for clean, dry, warm ones; lest by retaining a great quantity of putrescent steams, they should add fuel to the disorder. Indeed neatness, and cleanliness should, at all times, be particularly attended to, after every childbirth. For this purpose, a short jacket-like shift, reaching only as low as the navel, as *Baron van*

SWIETEN

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SWIETEN rightly observes¹, might be so contrived as to have a detached piece of cloth fastened to it to wrap round the inferior parts, and to be easily taken off, or put on, as occasion requires, without fatiguing the patient. In changing the linen, great care should be taken that the access of cold air, under the bed-clothes, be prevented.

All kinds of bandage, upon the trunk of the body, must likewise, in this malady, be carefully avoided; lest by their pressure upon the tender *abdomen*, and inflamed *viscera*, they should help to increase the disorder. And it should be always remembered, that a compression of the *abdomen*, after any childbirth, is very prejudicial; for reasons which will appear more fully hereafter, when we come to treat of the causes of this disease.

Let me add, to these directions, that all infants, after delivery, when cleaned and placed in bed, should always be put to the breast, as soon as ever they begin to cry, or show

¹ Comment. in Boerh. Aphor. Tom. iv. pag. 626.

any signs of uneasiness, though it should happen only a few hours after they are born. This practice is very beneficial, both to the mother and the child. It opens the lactiferous ducts, causes an easy and gradual flow of milk, and often prevents pain and soreness of the breasts, which frequently arise from an accumulation, and obstruction of the lacteal fluid. And, to a new-born infant, the mother's milk is both food, and physic.

Great regard must also be paid to the state of the air in which the sick person breathes. The room should be large, and kept very cool. Fresh air, in warm, or even temperate weather, should be let into it, by an opening at the windows, or door, every day. The chief caution necessary, with respect to this last direction, is to prevent a thorough current, or the air blowing directly upon the place where the patient lies. The covering, upon the bed, should be no thicker than what the patient has been used to, when in health. The bed-curtains should be kept pretty open, to give the sick woman an opportunity of breathing a pure atmosphere. I do not object to having a fire, provided

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vided it be not so large as to over-heat the apartment. A small fire is of service; it acts as a ventilator, by carrying off the impure air along with the smoke, and causing a quick succession of fresh air into the room. Some regard, in relation to these general rules, must always be paid to custom. A person, for instance, who has always been used to lie very warm, is not to be so much exposed as one who has been accustomed to lie more cool: yet such an one is not to be kept hotter, after delivery, than usual. The author does not mean to recommend, but to avoid extremes; and to be always guided, according to the different circumstances of the case.

The custom of confining lying-in women, in an over-heated air, and to a warm regimen, is frequently attended with the most fatal consequence. It renders the whole nervous system extremely irritable, creates thirst, causes frightful apprehensions, tremors, palpitations of the heart, loss of sleep, uneasy dreams, febrile heats, premature and hurtful sweats, pains of the head, miliary eruptions on the skin, and fevers of the most dangerous kind. Yet how often do we find this

baneful method put in practice ! How careful are the good women to stop up every crevice, and keep out every breath of air ! How anxious in heaping clothes upon the bed, so that the poor patient can hardly breathe under them ! How cautious lest the curtains of the window, or bed, should be withdrawn ! How observant in keeping up great fires in the room ! And, that the internal state of the patient may correspond with the external, they take care to give her very liberally of warm caudle, with plenty of spices, and all the good cordial drinks they can think of, and these to be swallowed as hot as the mouth, and stomach, can well bear them ! If this be not the readiest way to cause inflammations in the bowels, and other *viscera*, and fevers of the worst tendency, in a person whose blood is already over-heated by a swift circulation, during the repeated pangs, and throes of labour, I know not which is. But most certainly this is not the way to check the rapid motion of the blood ; to cool the inflamed body ; to quench thirst ; to cure an aching head ; and to call forth soft slumbers, and a gentle breathing through the skin. Reason, experience,

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ence, the inspection of the bodies of those who have died after puerperal diseases, all plead strongly against it,

Miliary fevers, and others of the like kind, are reckoned very common to lying-in women. Yet I am persuaded, from manifold experience, that these fevers are more the offspring of a heated room, and warm regimen, as observed before¹, than of any thing peculiar to the state of childbed-women. I have attended more than fourteen hundred women, after their deliveries, in **THE LONDON LYING-IN HOSPITAL**; yet I do not remember, ever meeting with an instance of the miliary fever, in that house. This I attribute partly, to the cool regimen that is strictly enjoined to be observed there; but above all, to the admission of cool air, which is ordered to be let into the wards, every day, at an opening in the windows. And probably it is for the same reason also, that I have never observed, in that excellent **ASYLUM** for pregnancy, any *petechiæ*, *vibices*, *exanthemata*, *vesiculæ*, *puncticula*, or any other febrile eruptions, joined with the

fever of which we are now treating. But to return to the cure.

After the disorder is abated, or even after it seems to be gone off, a particular attention must continue to be paid to the state of the bowels. These must be kept gently open, for some time, till the patient be quite out of danger. And if there should be a relapse, the treatment must be the same as above described, only adapting it to the strength of the patient, and the particular circumstances that may happen to occur. But the more effectually to prevent a return, and to restore the weakened bowels to their due tone, small quantities of chamomile-tea, or a slight infusion of juniper-berries, may be drunk, three or four times a day, either by themselves, or with a few drops of the *elixir vitrioli acidum*. After this, a cooling opening diet, with fresh air, bark of Peru, and gentle exercise, will confirm the cure.

It may probably seem wonderful that so simple a treatment, as hath been prescribed, should be powerful enough to remove so terrible a disorder. And I must needs own it

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it hath often been a matter of agreeable surprise to observe how readily the disease, though very violent, would yield to this simple method of cure. Let us from hence, therefore, draw this conclusion, That it is not the multiplicity of medicine, but the knowledge of the cause, that must remove a disease. Herein lies, the great mark of distinction, betwixt the physician and the empiric,

The reader may observe, that, in the cure of this malady, no regard hath been paid to the obstruction of the *lochia*, nor any particular remedies proposed for its removal. All such notice hath been purposely omitted. The author considers the obstruction of the *lochia*, as only the effect, not the cause of the disease. Take away the cause, and the effect will cease. Or, in other words, cure the disease, and the flow of the *lochia* will return of course. I the rather insist upon this, that not even the least pretext may be found, in this disorder, for exhibiting emmenagogues, and uterine medicines, as they are commonly termed, such as the *pulvis e myrrha compositus*, volatile salts,

salts, distilled oils, spirituous waters, and the like¹; which are not only ineffectual, but noxious. The best emmenagogue, in a suppression of the *lochia*, is a cooling regimen, and a judicious regulation of the alvine discharge.

§ 2.

WE will now proceed to the treatment, of the disease, in its more irregular, and complicated state. It hath already been remarked, that a *diarrhoea* will sometimes commence at the very beginning². When this is the case, it is by no means to be checked; but we are to assist the beneficent operations of nature, by ordering the patient to drink plentifully of mild, aperient liquors. Barley-water with nitre, lemonade, whey made with rennet or vinegar, thin water-gruel, weak chicken-broth, a slight infusion of malt, or a drink composed of a quart of barley-water with the addition of two ounces of the juice of Seville oranges impregnated with one drachm of salt of tartar, ac-

¹ Vid. Institut. Boerh. §. 1226. pag. 516.

² Page 9.

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According to the different circumstances of the case, are proper on this occasion. They answer three good purposes; they help to dilute, correct, and expel the acrimony lodged in the *primæ viæ*, which nature is endeavouring to throw off. If a vomiting, or *nausea*, should accompany the looseness, chamomile-tea should be given immediately, and drunk in such quantities as to cause a plentiful evacuation upwards. And in case these methods should prove insufficient, to assist nature in making a thorough discharge of the offending matter, recourse must be had to the more powerful means prescribed in the former part of this chapter¹. The necessity of this must be judged of, by the nature and quantity of the discharge, and the relief the patient receiveth from thence.

If the pain of the hypogastric region should be accompanied with violent stitches in the sides, or over the pit of the stomach, and a pulse that resists the finger pretty strongly, then bleeding would be highly necessary. The first quantity should rarely

¹ Page 58, 59.

exceed eight ounces, and, in about six, or eight hours afterwards, if the pulse still preserve its strength, and the pain continue, the arm should be tied up again, and a second quantity drawn from the same orifice. If that vein refuse to bleed, then a fresh opening may be made in some other part. We must be guided, in our second bleeding, by the appearance of the blood drawn, and the particular circumstances of the patient, considered both separately, and collectively. When the pulse, and strength of the patient, are in such a state as not to bear much loss of blood, and yet indicate some evacuation that way, cupping on the shoulders may supply the place of venæsection with great advantage. In this case, we should attend to the rule laid down by ARETÆUS of Cappadocia, and have the cupping-glasses much larger than what are commonly made use of: "*esto autem magna (cucurbita) omni ex parte lata, dolentem locum ambire valens*."

But it should be always remembered that bleeding, in the puerperal fever (I speak

*De Morb. Acut. curat. Lib. 1. cap. x. pag. 92.

with

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with submission) is only to be considered as a secondary relief, though the first in point of time, and that the greatest stress is always to be laid upon evacuations by stool. In the quantity of bleedings, therefore, allowance should always be made for these evacuations, which must, at all events, take place. This is a very nice point to determine, and must entirely rest upon the sagacity, and judgment of the physician. An error, on either side, may be hurtful; for if bleeding be neglected, when necessary, it may increase the great tendency which we find to inflammation, not only in the *omentum*, but in the lungs, and other *viscera*; and if too much blood be taken away, it may weaken the patient so much, as to prevent her supporting the other evacuations. And from hence, I imagine, we may account for that contrariety of opinion, which we meet with, among authors, with respect to bleeding in general, in the puerperal fever. Some laying it down as absolutely necessary, and others as strongly opposing it.

Were I to interpose my opinion in this matter, I would follow the advice of the intelligent

telligent CELSUS, and not slavishly adhere to either of these tenets; but be, as it were, of a middle opinion, betwixt the opposite extremes¹. I would say that there are some cases where bleeding is very necessary, and others where it is highly improper; and that these will depend upon many contingent circumstances which can only be rightly understood by the skill, and attention of the physician. The best criterion to judge by, is the pulse, and period of the disease. If the pulse be full, and vibrate strongly against the finger, bleeding is proper at any period, and under any circumstance; but more particularly so in the beginning. But if the patient hath neglected to call in advice in due time, by mistaking the disease for after-pains, or any other malady, then let the physician deliberate, and proceed with caution. For though there may be a flattering strength in the pulse, yet a tendency to a gangrene, in the *omentum*, and other *viscera*, will often follow soon after, and nature will be hurrying on towards a *diarrhoea*, which seems to be the only way she takes, in order to relieve herself from such a terrible disaster. If I must err, therefore, in this

¹ In præfat. pag. 12.

PUERPERAL FEVER. 77

case, and who amongst us is free from error? "*Est enim hæc ars conjecturalis, neque respondet ei plerumque non solum conjectura, sed etiam experientia!*"^{*} let it be rather, I say, in point of bleeding too little, than of bleeding too much, and in making up the deficiency by evacuations by stool.

To return to the pains in the side: I have rarely observed any signs of expectoration in this case; for though there is generally more or less of a cough, yet there is seldom any wheezing, rattling in the throat, or spitting, unless where the patient has laboured under a *phthisis pulmonalis*, or some other complaint in the breast, before the disease came on. The way by which nature seems to endeavour to relieve herself, is a *diarrhoea*, and sweat. She generally excites both these evacuations, from the first; and the stools are commonly very fetid.

Guided by her operations, these have been the two outlets I have always had in view; carefully endeavouring to proportion them to the strength of the patient, and the nature

^{*} Cels. in præfat. pag. 13.

of the alvine discharge. If the stools continued fetid, I pursued that evacuation; if they became watery, or better conditioned, I refrained. The diaphoresis was promoted, by the general methods above described. Where the pulse showed any degree of strength I always began the cure with bleeding, and repeated the operation according to the circumstances of the case. At other times, the pulse hath been so very quick and weak, that I durst not venture to order blood to be drawn.

Blistering, under these peripneumonic circumstances, is always proper, and can hardly be dispensed with. A vesicatory, as large as the hand, should be applied the very first hour, if possible, to that side where the pain is most violent. In the space of eight or ten hours, if the pains be not alleviated, another blister of the same magnitude, should be put upon the contrary side. And if there be no particular stitch, but only a general oppression in breathing, then the plaster may be laid between the shoulders; and afterwards, if occasion require, first to one side and then to the other. Oily, or *sperma ceti*, emulsions, are very proper helps to quiet
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any cough that may attend; but no other stress is to be laid upon them. These may be assisted, by making the patient breathe over the steam of hot water, to which a few grains of camphire, dissolved in a small portion of vinegar, have been added.

In this puerperal peripneumony, when the pulse begins to flag, and the disease puts on a putrescent state, the patient must be supported by cordials. For this purpose, the *sal cornu cervi* may be given, joined with the bark, and softened with a solution of *sperma ceti*, to make them go down smoothly, and not irritate the *fauces*, or stomach. As a drink, I have frequently ordered CLUTTON's febrifuge spirit, when properly diluted, which he directs to be prepared in the following manner:

“ *R. Ol. sulphur. per camp. legitime præparat.
Vitrioli rect.*

Salis an. p. æ.

Spir. Vini rectificatiss. triplum horum omnium, digere per mensem; & ad siccitatem distilla¹.”

¹ Vid. A short and certain Method of curing continued Fevers. By Jos. CLUTTON. Edit. 3d. pag. 9.

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He advises so much of this spirit to be put to such a quantity of clear spring water, as will make it gratefully acid, and then to be sweetened with fine sugar, according to the patient's palate; and thus you will have, he says, as agreeable a liquor, or julep, as can be desired by a thirsty person. I commonly give it, in the proportion of one ounce, to a quart of water. It generally promotes sweat, but sometimes it will rather disagree with the stomach. This febrifuge liquor of CLUTTON is supposed to be the famous *Punch* which is kept as a secret, by some inoculators, and given to lower the fever when too violent, and prevent too great an eruption of the small-pox.

From the recommendation of the *radix senekæ*, or *polygala Virginiana*, in pleuritic diseases, I have been induced to try the efficacy of that root in the case now under consideration; but have not yet had sufficient experience of it, to determine any thing with certainty. But if what hath been reported of it holds good, it seems to possess qualities that may be serviceable in this complaint. For it is said to supersede, in
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a great measure, the necessity of bleeding; to operate chiefly by stool, urine, and perspiration, without inflaming the body; all which are the great intentions, according to my idea, that are principally to be followed in the cure of the puerperal peripneumony.

When the puerperal fever is thus combined with a peripneumony, the disease becomes at once very desperate, and requires the utmost skill, and attention to save the patient. It seems to be no less than a general inflammation of the *omentum*, intestines, and lungs, and sometimes also of the stomach, commencing nearly at the same time, and disposed to run quickly into a state of gangrene. Not a moment's time is now to be lost, but the cure should commence, with all the power of art, within a few hours of the attack, if possible; otherwise, the disorder makes such rapid progress, that the case in a short time becomes, in a manner, irretrievable. This obliges me to repeat, to the attendants of all lying-in women, what I have mentioned again and again; namely, that violent pains about the *abdomen*, coming on soon

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after delivery, if neglected or trifled with, will frequently prove mortal !

Sometimes stitches, and difficulty in breathing, which arise only from flatulencies in the stomach, or *colon*, will shoot about the short ribs and prove troublesome. They are easily distinguished from those of which we have just now been speaking, by their shifting from one place to another, and the small degree of fever that accompanies them. They are generally attended with a costive body, and go off, after procuring a stool, by clyster or otherwise. If the belly be open at the same time, they are easily dispersed by a draught prepared with *asa fætida*, and a few drops of the Thebaic tincture.

If a cough should be troublesome, I mean singly considered, or if there should be a violent pain in the head, then a blister betwixt the shoulders generally gives the most relief. In the former case, *sperma ceti* draughts with nitre often assist the blister, but are generally too ineffectual of themselves. A
few

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few drops of the *tinctura Thebaica* may sometimes be added with great propriety. And now and then I have found, after the fever has gone off and a cough remained with difficulty in breathing, a small quantity of the *tinctura fœtida* given with a solution of *sperma ceti*, or *gummi Ammoniacum*, of great service: and more especially, if there were any flatulent complaints in the stomach, or bowels.

When the pains of the *abdomen*, in spite of the general treatment described in the first part of this chapter, continue very severe, we must call in to our assistance external applications. Fomentations, emollient cataplasms applied over the whole *abdomen*, bladders of hot water, softening oils either pure or medicated, steams of hot water conveyed to the part, blistering of the *abdomen*, may all be tried in succession.

When the puerperal fever proves very violent, whether the disease be single or combined, it generally terminates in a *diarrhoea*. This, however, is to be considered in no other

light, than the kind efforts of nature to relieve herself from the disorder within the *abdomen*, and to carry it out of the body, by means of the nearest emunctory; that is, the intestinal canal. This she boldly attempts, by a profuse discharge. It is the last struggle, which nature makes with the disease; and if her strength be sufficient to support her efforts, she may come off victorious. And this brings us to the conclusion, of the curative part of our discourse, after first considering how far art may assist nature, in carrying on this great design. The chief intentions of cure, in this critical state of the disease, are, to moderate the efforts of nature, with respect to the profuse *diarrhoea*; to endeavour to keep up the *vis vitæ*, or strength of the patient; and to correct the putrescent state of the solids and fluids. For this purpose an astringent antiseptic clyster should now and then be injected. Emollient, diluting, or nourishing clysters are, at the same time, to be interposed, as different circumstances shall require, but so as not to over-fatigue the patient. They may be composed of chamomile-tea, fat broth, pure oil, beef-tea, or the like. Thirty

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grains of the *philonium Londinense*, with one grain of the root of *ipecacuanha*, may be given, about once in twenty-four hours, in the form of a bolus, or in a little simple cinnamon water. And an astringent cordial mixture, may be in readiness, to take after every stool. In case of faintness, or great sinking, red wine and water, with a few drops of the *spiritus volatilis aromaticus*, may be given by way of cordial. The patient must be supported by nourishment, which should be given in small quantities and often, as well as by medicine. Chicken-water, or mutton-broth made weak and cleared of all its fat, beef-tea, rice-milk, a little chocolate and milk, or the gelly of hartshorn, are very proper. For drink she may take, very frequently, a tea-cup full of milk and water, or three parts milk and one of lime-water, or a slight decoction of logwood, or mint-tea, rice-gruel, red wine and water, or chamomile-tea; and add to these, at any time, a few drops of spirit of hartshorn.

These are the proper helps to moderate the colliquative discharge, and to keep up the strength of the patient. But the most capital

tal point of all yet remains: I mean, to cut off the purulent *fomes*, the chief cause of the disease (as the dissections seem to indicate) and restore the tainted *omentum* and intestines to somewhat of their perfect state. With this view, after checking the looseness by the above methods, I have thrown in, between whiles, as much Peruvian bark as I durst venture on, guarded by aromatics and opium. When the *diarrhoea* returned, then the bark was omitted, till that complaint was mitigated; and so alternately. In such a dilemma what can the power of art do more than give nature an opportunity to throw off, at intervals, the morbid surcharge, and, in the intermediate space of time, to endeavour to keep up the *vis vitæ*, and correct the remaining putrescence of the solids and fluids? By these means life may generally be prolonged, and as there must be different degrees of the disorder, from the slightest to the most inveterate kind, it may sometimes be preserved.

But when the disease has arisen to such a pitch, as to render the *omentum* gangrenous, to induce a putrescent state upon the intestinal

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nal canal, and to cause a large quantity of purulent, and other morbid liquors, to float among the *viscera*; is it at all wonderful, that the patient should at last frequently sink under this colliquative discharge? In such a desperate case, must it not require more than the united force of the whole *materia medica*, to withstand its power? What medicine hath sufficient virtue to penetrate into the inmost recess of the body, and recover the putrid *omentum*? What plant is efficacious enough, to heal the morbid intestines, to revive the sinking state of the patient, and draw off the purulent discharge from the cavity of the *abdomen*? Where is such a remedy to be found?

*Dic, quibus in terris, et eris mihi magnus Apollo?*¹

¹ Virgil. Ecl. iii. ver. 104.

C H A P.

C H A P. V.

The sentiments, of Writers in general, relating to the Cause of the Puerperal Fever.

TO render this chapter more useful, I shall frequently depart a little from my main subject, in order to give the opinion, of different authors, with respect to bleeding in this disorder; which, as observed before, is a point of no small controversy.

H I P P O C R A T E S.

HIPPOCRATES is the most ancient physician, whose works have come down to us; and is therefore surnamed *the father of medicine*. He was born in Cos, an island in the Archipelago, and practised physic principally in Thesaly and Thrace. He flourished in the time of the Peloponnesian war, that is, about four hundred and thirty years before the Christian æra. It is supposed to have been five hundred years

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years, after his death, before his works were collected together, to form them into a body. This was done, in the reign of the emperor ADRIAN, by two physicians of Alexandria, ARTEMIDORUS CAPITO, and DIOSCORIDES. The Greek language had suffered such a change, during that time, that though they were native Greeks, yet they met with a variety of words which they did not understand; and GALEN charges them with taking too much liberty in changing several words of the text¹. Besides this, it is no difficult matter to imagine that the first compilers of the works of HIPPOCRATES, at so great a distance of time as five hundred years, might meet with a variety of pieces which did not properly belong to him, but, being found in the same collection, might be mistaken for his, or at least be thought worthy of being bound up along with them. The original manuscripts also, after the compilation was made, by passing through a variety of hands, and mouldering in libraries for centuries together, must probably have undergone very great changes.

¹ Comment. 1. in Lib. HIPPOCR. de Natur. Hom. Charter. Tom. iii. pag. 97.

From these, and a variety of other circumstances, the writings of HIPPOCRATES may not improperly be compared to an ancient Grecian building of admirable workmanship, but much defaced by length of time. Such as have been desirous of preserving, or repairing, this beautiful Ionic structure, may be considered as having gathered together the scattered ruins, and stuck them into different parts of the building where they imagined they best corresponded. Others, not finding materials sufficient to supply all the defects, may be supposed to have added some of their own carving, or to have fetched them from the ruins of other antique buildings, of similar structure. Hence the whole becomes strangely chequered, and patched. Hence the division of the works of HIPPOCRATES into true, and spurious; hence also the difference of style, the various readings, the frequent repetitions, and seeming inconsistencies which are to be found in various parts of his works.

I have frequently thought, if these Grecian remains of antiquity were ranged into a proper systematical order, with all the various
readings

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readings annexed, and the whole enlivened by a spirited translation, that it would render them much more useful, and cause them to be more generally read. In the arrangement, those parts which, by the experience of many ages, are found to be true, and to correspond with each other, might, with propriety, be linked together, though in the original they be found separate; and those which are not warranted by nature, and repeated observation, might be looked upon as so much extraneous matter, which did not properly belong to the building, but was merely adventitious, and therefore to be placed by itself. This would be reducing the whole works of HIPPOCRATES to order and truth, grounded upon long practice, which is the great point required. For it matters not whether such a book, or such a part of a book, was written by HIPPOCRATES himself, or his disciples; by his father, or grandfather; so long as we can come at a complete system of ancient medical science, established upon the experience of many ages, and many nations! In collecting the account of the disease, which is the subject of our present inquiry,

* Vid. Le Clerc. *Histoir. de la Medec.* Part 1. chap. xxx. pag. 239.

out of the writings of HIPPOCRATES, I will endeavour to follow the plan here pointed out, that the reader may judge how far it may answer, and more perfectly comprehend my meaning. I have also marked, for the sake of the curious, those parts in the Hippocratic description which more particularly correspond with the passages in the body of this treatise, and referred the one to the other by marginal notes.

HIPPOCRATES hath plainly described the puerperal fever, though he hath given no particular name to it, and supposes it to be caused by an obstruction of the *lochia*, as we may learn from the following words: *Ην δὲ μὴ χωρὴν οἱ ἡ κἀθαρσις (λοχείη), ξυμβήσεται ὥστε μιν πυρεταίνειν καὶ φρίκην ἔχειν, καὶ τὴν γαστέρα μεγάλην εἶναι. Ην δὲ ψαύσῃ αὐτῆς, ἀλγέειν πᾶν τὸ σῶμα, μάλιστα δὲ ἢν τις τῆς γαστρος ψαύσῃ καὶ καρδιώσσει ἄλλοτε ἢ ἄλλοτε, καὶ ὀσφὺν πονέει. Καὶ ἀσιτιή, καὶ ἀγρυπνή, καὶ νυγμός. Ἐπειτα ὁ ἡμέρη πέμπτη ἢ ἐβδόμη, ἔστιν ὅτε ἡ κοιλία ταρασσεται*, καὶ ὑποχωρεῖ μέλανα, καὶ κάκοσμα.*

* Καὶ νυγμός ἔπεται, &c. CORDÆUS sic ad præcedentia retulit et legit. Charter. Tom. vii. pag. 900,

* When the disease hath been left to nature, I have more than once known a *diarrhoea* supervene about the time here mentioned.

κάρτα ἄλλοτε καὶ ἄλλοτε, καὶ ὡς ὄνειον οὖρον.
Καὶ ἦν ὑπέλθοι, δοκέει οἱ ρηότερον εἶναι καὶ
μελεδαινομένη, ἐν τάχει ὑγίης γίνεται. Ἦν δὲ
μή, κινδυνεύσει διαρροίης αὐτῇ ἰχυρῆς ἐπιπεσῶσης¹,
καὶ τὰ λοχεῖα οἱ κρύφεται^{2*}. Σφυγμοίβληχροί,
ἔστι δ' ὅτε καὶ ὀξέες ἄλλοτ' αἰερόμενοι, ἄλλοτε
ἐλλείποντες. Ταῦτα πάχει ἀρχομένης τῆς νόσου,
καὶ ὧδε ἔχει· ἦν δὲ προῖη τῷ χρόνῳ, τὰ κοῖλα τῷ
προσώπῳ ἐρυθρὰ γίνεται. Οταν ὧδε ἔχη, δίδοναι
κοῦφα σιτία· κ' ἦν ὄργα, φάρμακα πίσαι κάτω·
ἦν μὲν χολώδης ἦ, ὃ, τι χολὴν καθαίρει· ἦν δὲ
φλεγματοῦδης, ὃ, τι φλέγμα. Μετὰ δὲ τῷτο,
πυριῆσθαι³ τὰς ὑγέρας εὐώδεσι καὶ προσθεῖναι
μαλθακτῆριον⁴ τὴν ἡμέρην †. Εἰ δ' ὀρμηδεῖν
γυναικὶ λοχεῖν κάθαρσις ὡς ἐς κεφαλὴν, θώρηκά τε,
καὶ πλεύμονα (γίνειαι γὰρ τῷτο) καὶ στήσασσι
πολλάκις αὐλικά, ἦν ἴχνηται ||.

The text, I apprehend, will bear the following translation: *Si verò ei purgatio* (puer-

¹ Ἐπεισπεσῶσης. S. Charter. Tom. vii. pag. 900.

² Κεκρύφεται. M. S. R. *Ibidem*.

³ Πυριῆσαι. S. *Ibidem*.

⁴ Μαλθακτῆρια. S. & F. *Ibidem*.

* Περὶ Γυναικ. πρῶτ. Charter. Tom. vii. cap. xxxvii. pag. 751.

† Περὶ Γυναικ. πρῶτ. Charter. Tom. vii. cap. xl. pag. 752.

|| Περὶ Γυναικ. πρῶτ. Charter. Tom. vii. cap. xlv. pag. 755.
perii)

perii) non provenit, proximum est ut febris cum horrore¹ oriatur; & ut venter tumidus fiat. Sin autem eam attigeris, totum corpus dolorem sentit, et præcipue si quis ventrem attigerit²; interdum etiam ardor ventriculi³; dolorque lumborum⁴ urget. Et cibi fastidium⁵, & vigilia⁶, & corporis compunctio adest. Post hæc, vel quinto vel septimo die, alvus turbatur, & quæ excernuntur nigra sunt⁷, & interdum perquam mali odoris⁸; & urina eam asini repræsentat. Quæ si incidunt, melius illi esse videtur⁹; curæque habitâ mature ad sanitatem pervenit¹⁰. Sin minus autem, periculum erit, ne ei profluvium alvi vehemens superveniret¹¹, & purgamenta puerperii supprimerentur¹². Pulsus arteriarum imbecilli sunt, interdum verò etiam celeres; modò valentes, modò exigui¹³. Hæc in principiis morbi patitur, & sic se habet; interposito autem temporis spatio, cavæ partes faciei rubescunt¹⁴. Ubi ea fieri

¹ Pag. 3. lin. 7. of this treat. ² Pag. 9. lin. 3.

² Pag. 2. lin. 1.

¹⁰ Pag. 12. lin. 15.

³ Pag. 1. lin. 7.

¹¹ Pag. 16. lin. 10. and 32, 16.

⁴ Pag. 2. lin. 14, and 8, 10.

¹² Pag. 9. lin. 8. and 83, 23.

⁵ Pag. 2. lin. 18.

¹³ Pag. 10. lin. 23.

⁶ Pag. 8. lin. 10.

¹⁴ Pag. 5. lin. 17.

⁷ Pag. 4. lin. 16.

¹⁵ Pag. 5. lin. 7.

⁸ Pag. 9. lin. 3.

apparent,

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apparent, leves cibi dandi sunt ¹⁶; & *si aliquid superat, medicamentum catharticum sorbendum est* ¹⁷; *si quidem biliosa (ægra) fuerit, quod bilem purget; sin autem pituitosa, quod pituitam. Deinde locis muliebribus fomenta* ¹⁸, *quæ ex odoribus fiunt, admovenda sunt; & quæ emolliunt* (μαλθακτῖγια) *quotidie superimponenda* ¹⁹. *Si verò purgatio puerperii mulieris quasi ad caput, thoracemque, & pulmones* ²⁰, *cum impetu fertur (id enim evenit) sæpe statim moriuntur* ²¹, *si illic detineatur.*

We have here a pretty accurate and plain description of the puerperal fever, as observed by HIPPOCRATES, which, in most parts, exactly corresponds with what has been said of it in the first part of this treatise: inasmuch that had both descriptions been written about the same time, it might have been disputed which author had borrowed from the other. But the truth is, neither of them, in the least tittle, copied from the other; but from nature alone. Hence it is the similarity arises: from which also

¹⁶ Pag. 62. lin. 21. and 63. 13.

¹⁷ Pag. 58. lin. 17.

¹⁸ Pag. 83. lin. 15.

¹⁹ Pag. 83. lin. 15.

²⁰ Pag. 2. lin. 16.

²¹ Pag. 33. lin. 1.

we may learn, that the operations of nature upon the human frame, in this disease, are the same in Britain, as in Greece; and continue the same at this day, as they were above two thousand years ago! This is likewise a clear proof of the immutability of the puerperal fever, that it is an original disease, and hath been prevalent at all times, and in all climates, and yielded to the same method of cure as hath been prescribed above.

In collecting the description of this disease, out of the writings of HIPPOCRATES, it may be remarked, by consulting the original, that I have dropped part of the sentence which precedes the words *σφυγμοὶ βληχρoί*, as being nearly a mere repetition of what had been said before on this subject, and interrupting the regular flow of the description. It may be said, indeed, that this method of selecting the history of a disorder, out of the works of HIPPOCRATES, is paying too great a deference to antiquity; and that, by picking out a sentence here and there, an accurate and complete description of almost any disease, might be drawn up and presented to the reader. To this I answer,

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swer, that it is not so, in the present case; for I have inserted nothing, in the description, but what is regularly classed under the head of obstructed *lochia*, the true cause, in the opinion of HIPPOCRATES, of the malady under consideration. In a word, I have done nothing more than brought together, the different parts of the description, into one point of view, which in the original are separate and diffused, in order to place them in a stronger light; a piece of justice, in my opinion, due to *the divine old man*, whose concise manner of writing does not favour tautology, how much soever it may have crept into some parts of his works.

Anno Dom. 1000. AVICENNÆ, *canon medicinæ. Per Fabium Paulinum Utinensem: Venetiis, 1608. tom. i. lib. 3. fen. 21. tract. 2. cap. 33.*

The true name of this author is *Abou Ali Al Houffain, Ben Abdallah, Ben Sina*, that is, father of Ali Al Houffain, son of Abdallah, son of Sina; commonly called

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by

by the Musulmen Eb'n Sina, and by the Europeans AVICENNA, the name by which this Arabian phyfician is generally known. He does not enter into a particular description of the puerperal fever, but speaks of it in general terms, together with the obstruction of the *menses*; though the title of his chapter is, "*De dispositionibus enixarum.*" He seems to attribute it to a retention of the *lochia*, and to ascribe the same effects to this, as to an obstruction of the *menses*. "*Perducit retentio menstruorum, inquit, ad febres pravas, et ad apostemata prava, et multoties accidit ex itura ex partu difficili. Et quandoque accidit eis (enixis) inflatio ventris, et fortasse moriuntur.*" For the cure, he advises fumigations; and, if those do not answer, then bleeding in the *saphæna*, and adds, "*et phlebotomia, venæ curvaturæ poplitis, est fortior.*"

1560. *The byrth of mankynde, otherwyse named the womans booke.* By THOMAS RAYNALDE, *Physitian.* 1560. booke ii. cap. vi.

This book is a translation from the Latin. The original is said to have been written in
High

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High Dutch by EUCHARIUS RHODION, whose work was in great esteem all over Germany; and, about the year 1535, was translated into Latin, and other languages, and became universally the woman's book over all Europe.

The author of this performance supposes that fevers after delivery, may be owing either to an obstruction, a too great flow of the *lochia*, or a laborious birth. "It is also to be understood, says he, that many times, after the deliveraunce, happeneth to women other the fever, or ague, or swelling, or inflation of the bodye, other tumblynge in the belly, or elles commotion or settelinge out of order of the mother or *matrix*. Cause of the which thinges, is sometimes lacke of due and sufficient purgation and clenfyng of the (*lochia*) after the byrth, or els contrarywyse, over much flowinge of the same, whiche fore doth weaken the woman. Also the great laboure, and styrrynge of the *matrix* in the byrth¹. Nowe seinge then that it ensueth by so manyfolde occasions and causes, it shal be mete that women in this case be nothing

¹ Fol. 73.

ashamed ne abashed to disclose their minde unto expert physitians, shewing them every thyng in it, as they knowe whereupon it shoulde come, so that the phisition understandinge the womans mynde, maye the soner by hys learnynge and experience consider the true cause of it, and the very remedye to amende it¹."

1602. FELICIS PLATERI, *praxis medica. Basileæ*, 1656. *tom. ii. cap. xiii. De ventris dolore.*

This ingenious writer is of opinion that pains after childbirth are frequently occasioned by the cold air rushing into the cavity of the *uterus*, immediately after delivery, and distending it. But the grand cause, of the symptoms accompanying the puerperal fever, he attributes to an inflammation of the *uterus*.

"*Imprimis verò ex partus difficultate, ob summum dolorem & conatum, uterus frequenter inflammatur; tuncque vel foetu aut secunda remanente, aut hisce exclusis, ob subortam inflammationem, dolor & febris urgent: causaque hæc non minima est, quòd puerperæ vel*

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in partu, vel post eum, adeo dolent, & periclitantur, cum secundinæ solius retentio, hoc tam subito minime faceret sic uti hæc, quæ sequitur, inflammatio illas afficit; & præcipua mortis causa existit; nisi hoc ob largam sanguinis profusionem, in partu extra uterum, vel in illum factam accidat; adeo ut dolor qui post partum mulieribus evenit, non tantum, ob aërem illapsum, uti dictum, sed & hanc inflammationem, frequenter fiat: quorum ille tamen solo dolore, hic verò gravioribus accidentibus, majorique periculo affligit¹."

1634. DANIELIS SENNERTI, opera. Lugduni, 1656. tom. iii. lib. iv. part. ii. sect. vii. cap. xi. *De febribus & morbis acutis puerperarum.*

He says that puerperal fevers arise, either from a suppression of the lochial discharge, or an accumulation of noxious humours, during the time of gestation, which are put in motion by the succeeding labour. "*Febres autem illæ omnes, inquit, è duabus causis proveniunt, vel à lochiorum suppressione, aut imminuta purgatione, vel ab humorum vitioso ap-*

¹ Pag. 533.

paratu,

paratu, tempore gestationis cumulado, & in partu agitato. Nonnulli quidem etiam nimiam lochiorum purgationem addunt. Sed ea causa vix sola febrim excitat, sed latentem cachochymiam arguit¹."

He observes that bleeding, in these fevers, may be performed with great propriety, if it be indicated, and the strength will permit of it; and that if there be, at the same time, a suppression of the *lochia*, it must by no means be omitted. But if, on the contrary, there be a sufficient discharge from the *uterus*, he then thinks it is best to leave the whole work to nature. He gives the following directions, as to the veins most proper to be opened upon this occasion, and puts them under the head of a query: "*Quæ venæ in puerperis pleuritide laborantibus aperiendæ sunt? Dissentiunt de hoc valde medici. Ex hac difficili controversia ut nos expediamus, primò, quod sæpe dictum, hoc tenendum, febrem hanc non esse symptomaticam propriè dictam, qualis ex bubonibus & similibus inflammationibus interdum excitari solet, sed comitatam, quæ nimirum primaria est, comitem tamen & sociam habet inflammationem, dum natura partem materiæ, quæ febrem excitat, ad pleuram,*

¹ Pag. 749:

vel etiam ad aliam partem detrudit. Secundò naturam hîc errare, & vitiosam evacuationem instituere, dum humorem vitiosum, quem per uterum expellere debebat, ad pleuram vel aliam partem superiorem deponit. Tertio, ea de causa nullo modo naturæ hunc motum vitiosum adjuvandum esse; id quod fieret, si vena statim in brachio ejusdem lateris aperiretur: sed potius sanguinis ad uterum, per quem in puerperis natura recte agens eum evacuat, motum adjuvandum vel concitandum, venâ in talo vel poplite apertâ. Neque, quem casum ponit Varandæus, facile fieri potest, ut fluxus lochiorum nimius cum pleuritide conjungatur; cum si sufficiente quantitate fieret hæc evacuatio, ad pleuram sanguis non rueret. Sit tamen, ut hoc accidat: tamen impetus sanguinis, et humorum proculdubio tum copiosorum, non ad superiora convertendus. Multò minus, si, cum lochia naturaliter fluere videntur, pleuritis excitetur; vel statim è brachio ejusdem lateris vena aperienda, vel expectandum & videndum, an ab ista evacuatione pleuritis minui possit, quod itidem vult Varandæus. Etenim justam evacuationis hujus mensuram definire non ita facile est, eaque non nisi ex tolerantia fœminæ æstimari potest. Itaque etsi sic satis copiose sanguis

sanguis post partum fluere videatur, si tamen pleuritis accedat, argumento est, naturam non sufficienter, neque omnes quos debet, humores per uterum expellere, sed partem eorum vitioso conatu ad pleuram, vel aliam partem depellere. Ideoque ut ab istis conatibus natura avocetur, nullo modo in brachio vena aperienda, quo modo conatus iste adjuvaretur sed in crure vena aperienda, ut totus naturæ, quod vitiosum & molestum est, expellere conantis impetus ad uterum convertatur, & natura, ad partes superiores sanguinem movere desistat. Neque etiam, an subsequutura lochiorum evacuatio vitiosum illum motum naturæ emendare & revocare possit, expectandum, sed statim natura suo ab instituto avocanda, nec naturæ vitiosæ agenti res committenda, ne dum medicus otiosus spectator est, illa in instituto suo pergat, & ita malum augeatur. Quartò, si post venam in talo, quod commodissime fit κατ' ἔξω, apertam, pleuritis nihil minuatur, sed dolor & difficultas spirandi perseveret, vel etiam augeatur, non quod vult Massarias, in venarum in crure sectione persistendum; cum illæ nihil aliud quam revellere, nullo verò modo ex parte affecta derivare queant, quod tamen in morbo periculoso ut fiat, necessarium est. Si enim venâ in crure sectâ pleuritis non minuatur,

vel etiam augeatur, indicio est materiam ita jam parti affectæ inhærere, ut versus uterum amplius revelli non queat. Ideoque vena tum in brachio ejusdem lateris aperienda, ut sanguis è loco affecto vicinisque partibus evacuetur & derivetur; quod nisi fiat, ægra in vitæ periculum conjicitur. Neque metuendum, ut hoc modo natura à motu ordinario versus uterum avocetur; cum ei incommodo per venam in crure apertam jam obvium itum sit: & si aliquid omnino periculi metuatur, frictionibus & cucurbitulis cruribus apposis, dum vena secatur, id præcaveri possit; interdum etiam tempus illius evacuationis maxima ex parte jam præterierit; interdum verò, ubi natura plane vitiosè agit, vix motus quem omisit, revocari possit, & propterea vices ejus venæ in crure apertæ suppleverit, ut postea sine periculo, parti affectæ & pleuriti, vena propiore aperta, succurri possit¹."

1640. LAZARI RIVERII, opera medica universa. Francofurti, 1674. lib. xv. cap. xxii. De suppressione lochiorum.

Our author, LAZARUS DE LA RIVIERE, commonly called RIVERIUS, supposes the

¹ Pag. 751.

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puerperal

puerperal fever to be owing to an obstruction of the *lochia*; and observes, that the happy success of childbearing doth principally depend upon a proper flow thereof. He follows SENNERTUS in ascribing certain impurities to the blood collected in the veins of the *uterus*, and other parts of the body, during the nine months going with child; and in supposing them to be purged off by this discharge. Hence if it be suppressed, or diminished, infinite dangers, and calamities are said to arise; such as, acute fevers, phrensies, madness, melancholy, quinries, pleurisies, peripneumonies, inflammations of the *uterus*, and malignant tumours. The causes of this suppression he ascribes to a too great thickness of the blood, a narrowness or obstruction of the vessels, cold air, inadvertently received into the *uterus*, which closes the orifices of the vessels; taking cold at the feet, drinking of cold water, fear, terror, grief, and other passions of the mind, which withdraw the course of the blood from the *uterus*. His characteristic symptoms, which attend this suppression, are, a swelling of the belly, pain of the lower part of the *abdomen*, loins, and

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and groin; redness of the face, difficulty in breathing, perturbation of the eyes, rigors, fevers, faintings, and other symptoms related above. For the cure he advises, emollient opening clysters, and cupping-glasses to be fixed to the groin and hips, both with and without scarification. If these means are of no effect, the veins about the knees, or in both the thighs, are to be opened, or the hæmorrhoidal veins, if nature seem to point that way. But if this fever be attended with a total suppression of the *lochia*, then a vein must be opened in the arm.

1662. THOMÆ WILLIS, *opera omnia*.
Amstelodami, 1682. cap. xvi. *De puer-*
perarum febribus.

He begins this chapter with observing, that the fevers of lying-in women are attended with much more danger, than those which happen in common, and that they differ very materially both from a simple, and putrid *synochus*. The antecedent causes of these fevers he supposes, with SENNERTUS and RIVERIUS, to be a depraved disposition of the blood, from the long suppression of

the menstrual flux, during pregnancy; or from some evil affection of the *uterus* after childbirth. By these means he imagines that the blood is put in motion, that its sulphureous parts are exalted, rendered inflammatory, and imbued with fermentative particles, so as to dispose it towards putrefaction, and to impoison, as it were, the nervous fluid, and render it hurtful to the brain, and to the whole nervous system. Those kinds of evil, he says, being impressed upon the blood, ought to be purged off by the flux of the *lochia*; but if, after delivery, this discharge should be suppressed, a purification is prevented, a general corruption takes place, and infects the whole mass. Convulsive affections, also, arise about the *uterus*, which are communicated to other parts; inordinate motions are stirred up in the juices, which frequently conspire either to the production, or the exacerbation of the fever. The evident causes, which tend to induce this change upon the body, are said to be various. Such as, a painful labour, a solution of continuity about the *uterus*, a bruise, a retention of something which ought to be evacuated,

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an ulcerous disposition, and many other accidents of the like kind.

As to the cure, if bleeding be indicated, and there be a fullness of blood, and a very acute inflammation in the distempered part, he advises a vein to be opened in the foot, or to take away blood, from the hæmorrhoidal veins, by leeches. But if necessity urges, the operation may be performed in the arm, and if a second bleeding be required, it may be done in the leg. He concludes, this part of the cure, with this precaution, that a vein is not to be opened without great deliberation; for unless it bring present help (which he has rarely known it do) the pulse immediately becomes more weak, and the patient is made worse.

1667. FRANCISCI DE LE BOE, SYLVII,
*praxis medica. Amstelodami, 1674. lib. iii.
cap. viii. De lochiorum vitiis.*

This physician, likewise, ascribes the puerperal fever to a deficiency of the lochial flux. A total suppression, he says, cannot happen without greatly endangering the life of the patient. “*Retentus namque tunc in uteri substantia*

*tia cavernosa sanguis, mox ibidem corrumpitur, ac inflammationem, abscessum, ulcus, aliaque mala plura successivè producit*¹." He thinks if there has been a large discharge of blood at the time of delivery, and a stoppage afterwards, that it should not be termed a suppression; because, in this case, what ought to have come away, in the course of nature, after delivery, is preternaturally discharged immediately after childbirth. Cold imprudently received into the cavity of the *uterus*, at the time of labour, or applied externally to the skin, is supposed chiefly to conduce to this total suppression.

When the disorder arises from cold, he advises aromatics impregnated with a volatile salt, and uterine medicines, especially such as promote sweat. But when a fever is excited, by this suppression, he admonishes the prescriber to be very careful in the use of these aromatics, lest they should increase the febrile heat; and directs them to be qualified by the addition of acids, such as distilled vinegar, spirit of salt, vitriol, and the like. This is the more remarkable in

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SYLVIUS, as he is generally condemned for prescribing volatile alkaline salts, in fevers, and ascribing their cause to an acid. But I must do him the justice to say, that, in the cure of this disease, his rules are generally laid down with great accuracy, and judgment.

1668. *Traité des maladies des femmes grosses.*
Par FRANÇOIS MAURICEAU. *A Paris,*
1721. tom. i. liv. iii. cap. viii. &c.

Pains after childbirth, says our author, are frequently occasioned by the sudden suppression of the *lochia*, the matter of which choking up, as it were, the whole substance of the *uterus*, and there stagnating, causes a great distention of the part, and an inflammation, which communicates itself, by means of the *peritonæum*, to the whole hypogastric region; which hence becomes inflated, distended, and extremely hard, and, if the complaint be not soon removed, it frequently proves fatal in a very short time. When things are thus circumstanced, he recommends opening clysters, and the application of warm
and

and aperitive fomentations to the *pudenda*. These are to be assisted by venæsection, which he prefers sometimes in the foot, sometimes in the arm, and reasons upon it in the manner following :

“ *La saignée du bras doit être quelquefois préférée à celle du pied, & d'autrefois celle du pied se fait plus sûrement que celle du bras: comme par exemple, supposons une femme fort replete d'humeurs, & principalement de sang dans toute l'habitude, qui ait une suppression de ses vuidanges, causée par l'obstruction des vaisseaux qui les devroient laisser écouler, pour raison de quoy une inflammation de matrice luy soit survenue, ayant outre cela une grosse fièvre, & une grande difficulté de respirer, ainsi qu'il arrive ordinairement en ces rencontres: Il est très-certain que si on saignoit d'abord du pied cette femme, qui est extrêmement plethorique, on attireroit vers la matrice une si grande abondance de ces humeurs, dont toute l'habitude regorge, que son inflammation en seroit beaucoup augmentée, & par consequent tous les accidens de la maladie: Mais il vaudroit bien mieux en ce cas, désemplir au plutôt l'habitude par la saignée du bras premierement, laquelle on réitéreroit même deux ou trois fois s'il étoit nécessaire;*
après

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après quoy les plus pressans accidens étant en partie diminuez, on pourroit fort à propos venir à celle du pied; car par ce moyen la nature qui étoit presque accablée sous le faix de l'abondance des humeurs, en étant allégée d'une partie, domine & regit plus facilement le reste: Mais au contraire, s'il y a suppression de vuidanges, sans apparence de grande plénitude au corps, & sans aucun notable accident, pour lors on peut pratiquer d'abord la saignée du pied, si on le souhaite: Neanmoins je trouverois souvent plus à propos qu'elle fût précédée de quelque une du bras, pour dégager par ce moyen plus promptement la poitrine, à laquelle on doit particulièrement avoir égard en cette occasion. C'est pourquoy je ne suis pas de l'opinion de Mercurial, qui veut qu'en toutes suppressions de vuidanges on saigne toujours d'abord la femme du pied, & non pas du bras.¹

1682. THOMÆ SYDENHAM, *opera universa*.
Lugduni Batavorum, 1726.

The faithful SYDENHAM hath no where expressly treated of the puerperal fever,

¹ Chap. x. pag. 418

unless the posthumous work, under the title of *Processus integri in morbis fere omnibus curandis*, may be ascribed to him. There the disease is supposed to arise from a suppression of the *lochia*, and is said to be accompanied with a swelling of the belly; a dull pain in the lower part of the *abdomen*, loins, and groin; redness of the face; a difficult respiration; a wild look; shivering; an acute fever; fainting; cold sweats; pulsation and heat in the *uterus*; a palsy in the lower parts; and sometimes an epilepsy¹. But as this piece was not published by our author I will take no further notice of it, but pass on to his genuine works, where he has delivered his sentiments pretty plainly of the cause of fevers after delivery.

In his epistolary dissertation, to DR. COLE, he observes, that some women of delicate constitutions, by rising too early after childbirth, will be seized with the hysteric disorder which, in that case, brings on a total suppression of the *lochia*, succeeded by a numerous train of symptoms which soon prove fatal, unless prevented by great

¹ Pag. 610.

skill and diligence. He likewise takes notice, that a suppression of the *lochia* is sometimes followed by a fever, which either partakes of the then reigning epidemic, or proceeds immediately from it. And adds, that the same hysteric disorders which first occasioned the suppression of the *lochia*, rage now more violently, and, as it were, generate themselves afresh. “ *Lochia, inquit, primum imminuuntur, deinde sistuntur penitus; quorum suppressionem præmaturam longa symptomatum series excipit: quæ, nisi permagna tam diligentia, quam in medendo peritia, intercedat, ægram brevi perimunt. Nonnunquam post lochiorum suppressionem in febrem incidunt, quæ vel in earum, quæ tum grassantur, epidemicarum castra transit, vel ab ea sola pendet origine. Adde quod iidem adfectus hystericæ, quibus lochiorum suppressio in primis debetur, jam magis sæviunt, tamquam ex se denuo nati*.”

Here that excellent physician (I speak with reverence) seems to have lost his usual sagacity, and not rightly to have distinguished symptoms of the puerperal fever, from those

* Pag. 421, 422.

of the hysteric disease, but to have confounded them together. He might probably be led into this error from what he had observed of the hysteric disease, namely, that it could assume almost any shape. "This disease is not more remarkable, says he, for its frequency, than for the numerous forms under which it appears, resembling most of the distempers wherewith mankind are afflicted. For in whatever part of the body it be seated, it immediately produces such symptoms as are peculiar thereto: and unless the physician be a person of great judgment and penetration, he will be mistaken, and suppose such symptoms to arise from some essential disease of this or that particular part, and not from the hysteric passion¹." He then enumerates the apoplexy, hemiplegy, convulsions, *clavus hystericus*, palpitations of the heart, cough, pains resembling the iliac passion, a vomiting of green matter, or of an uncommon colour, the jaundice, a nephritic paroxysm, a *diarrhoea*, a sinking of the spirits, pains of the face, teeth, shoulders, back, hands, thighs, and legs, as being all

¹ Pag. 388.

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subject to its influence : and concludes with observing that DEMOCRITUS, in writing to HIPPOCRATES, did not without reason assert, that the *uterus* was the origin of six hundred evils, and innumerable calamities ! Is it then much to be wondered at, that a disorder, appearing under such a variety of forms, should, for once, deceive even a SYDENHAM ?

To remove a suppression of the *lochia*, he orders the woman to be confined to her bed, an hysteric plaster to be applied to the navel ; and prescribes an electuary composed of the conserve of Roman worm-wood and rue, troches of myrrh, castor, saffron, volatile salt of *sal Ammoniac*, and *asa fœtida* ; of which the quantity of a large nutmeg is to be taken every three hours, drinking after it four or five spoonfuls of a julep prepared with equal parts of the distilled water of rue, and compound bryony water¹. I will not take upon me to say but that such edged tools as these, to provoke the *lochia*, might be very safe, in the hands of our English HIPPOCRATES, but this I will

¹ Pag. 423.

venture to say, that they are not at all well calculated, for general use, to remove an ~~ob-~~struction of the *lochia*, for very obvious reasons which have already been recited when treating of the cure. Indeed, I have taken notice of this passage with no other view, than to put the incautious reader upon his guard; lest, confiding in so great an authority, he should be too apt to have recourse to such dangerous engines as these, upon any suppression of the lochial discharge.

1708. HERMANNI BOERHAAVE, *aphorismi de cognoscendis & curandis morbis. Lugduni Batavorum, 1737. Morbi puerperii. aph. 1329, &c.*

The cause of the puerperal fever, according to this illustrious professor, is a retention of the *lochia*, about the time that the ferous milky nourishment is making its way, from the newly contracted vessels of the *uterus*, towards the breasts; whence numberless symptoms arise, and of the worst nature, according as the *lochia* are carried, and thrown upon different *viscera*: such as,
phrensies

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phrensies, pleurifies, peripneumonies, quin-
sies, inflammations of the diaphragm, breasts,
liver, stomach, caul, mesentery, spleen,
kidnies, and intestines; as also, dysenteries,
colics, iliac passions, apoplexies, pal-
sies, and a great many other dangerous evils.

To prevent, or remove these complaints,
he advises gentle anti-acid remedies to sheath
the acid *serum*; soft diluents; the mildest spe-
cific aperients, from the moderately cordial,
uterine class; topical deobstruents, clysters,
fomentations, cataplasms, plasters, liniments,
cupping-glasses, pessaries, and suppositories.
He thinks that bleeding should never be
practised, in this disease, without the most
urgent necessity; but does not specify the
nature of such necessity. And lastly, he
cautions the physician from treating the
above symptoms, as if they were original
acute diseases.

1716. *Criticon februm: or, a critical essay on
fevers.* By EDWARD STROTHER, M. D.
London, 1718. chap. ix. pag. 212. *The
puerperal fever.*

This is the first writer, I have met with,
who gives the name of puerperal fever to this
disorder.

disorder. He says that it is preceded by symptoms common to other fevers; that its distinguishing marks are, pains in the hypogastric region, *abdomen*, and loins. He suspects it to appertain chiefly to the class of inflammatory fevers; and supposes it to be caused by a suppression of the *lochia*.

1720. FRIDERICI HOFFMANNI, *medicina rationalis systematica. Halæ Magdeburgicæ, 1734.*

It is not very evident whether this celebrated physician classes the puerperal fever under the head of an inflammation of the *uterus*, or the hysteric disease. An inflammation of the *uterus*, he says, is owing to an unequal circulation of the blood through the uterine vessels; namely, the capillaries being filled, and obstructed, by a spasmodic constriction, the blood is carried with greater velocity and force through the contiguous minute vessels, and their lateral branches, which in common do not admit the red part of the blood; whence arises tumor, redness, and sense of heat, with a compression and irritation of the nervous coat. Among the

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general

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general causes, which conduce to an inflammation of the *uterus*, he enumerates a plethoric and bad habit of body, a suppression of the *lochia*, a copious flux of blood to the *uterus*, a laborious birth, passions of the mind especially anger and terror, vehement efforts to vomit, external cold applied to the region of the *abdomen* and *uterus*, drinking of cold liquors during the lochial flux, a convulsive colic, and a violent spasmodic hysterical affection¹. In treating of the hysterical disease he observes, that a suppression of the *lochia*, happening early after delivery, will frequently occasion violent hysterical symptoms, but does not mention what those symptoms are, and quotes HIPPOCRATES in support of this opinion.

" In puerperis verò, ob lochiorum non rite succedentem fluxum, hystericas passiones frequentius observamus; quod etiam suo tempore HIPPOCRATES notavit. Novimus puerperas, primis sæpenumero à partu diebus, ab aëre frigido ad imum ventrem admissò, à levi animi motu, à longiori corporis extra lectum detentione, in sæva symptomata hysterica incidisse;

¹ Tom. iv. part. i. sect. ii. cap. x. De inflammatione & febre uterina.

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quæ etiam presso insequuntur pede, si, lochiis primis statim diebus deficientibus ac cessantibus, sectione venæ tempestiva haud succurratur¹."

To remove an obstruction of the *loch*, he prefers bleeding in the foot, rather than in the superior parts of the body. "*Sanguinis copia, inquit, sub graviditate justo plus accumulata, minuenda per venæ sectionem, non in superioribus, sed in pede institutam. Sæpe enim à nimia vasorum distensione fiunt spasmi, & sanguinis exsuperans moles uteri compagem nimium distendendo, ejusdem systalticam & expulsiivam potentiam minuit ac impedit. Hinc venæ sectionis remedium omnino maximi, ad promovendum lochiorum fluxum & inflammationem arcendam, est usus. Quod sicuti in Gallia, hunc in finem, frequentius quàm par est adhibetur; ita perperam in nostra Germania rejicitur, ut plures, inflammatoria uteri febre, correptæ pereant, quæ tempestiva sanguinis missione potuissent servari².*

¹ Tom. iv. part. iii. cap. v. *De malo hysterico.*

² Tom. iv. part. i. sect. ii. cap. x.

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1722. *Traité complet des accouchemens naturels, non-naturels, & contre nature. Par le Sieur DE LA MOTTE. A Paris, 1722. livre v. chap. vi. Des vuidanges qui coulent durant les couches de la femme, & de celles qui sont supprimées.*

This author follows the opinion of MAURICEAU, in supposing the disease to proceed from a suppression of the *lochia*. He apprehends that this obstruction may arise from a variety of causes, and some of them very slight ones, as will appear in the sequel. If the *lochia* continue to flow for a considerable time, or if they should even stop after a few days continuance, if this be the effect of nature and no ill consequence follow, he supposes no danger. But on the contrary, if this discharge has been pretty plentiful for several days, and is suddenly suppressed by any cause whatever, he then says it is always followed by some troublesome accident; and that nothing is more unaccountable, and irregular, than the causes which produce this suppression. For though they may sometimes be sufficiently considerable, they are at other times so very inconsiderable,

as to be really surprizing. I will recite them in his own words. “ *Il n'est pas extraordinaire que cette suppression succede à un emportement furieux, à une extrême peur, à une excessive joye, & à d'autres semblables passions, mais qu'elle arrive pour un mot dit par inadvertence, ou à l'occasion d'une bonne ou mauvaise nouvelle presque indifferente, à la personne à qui on la debite, par l'odeur d'une fleur, par un petit froid, par une peur legere, à l'occasion d'un cry imprévu, soit dans la rue ou dans la maison, & enfin un rien pour ainsi dire, dont la reflexion a causé la plus legere émotion, & qui interceptant le cours de ces humeurs, en cause à l'instant un reflux sur le bas ventre, & par toute l'habitude du corps, & qui donne lieu à une fièvre, à une tension, à une douleur au bas ventre, à l'oppression, au délire, & enfin à la mort¹.*”

1751. *An essay towards a complete new system of midwifery.* By JOHN BURTON, M. D. London, 1751. Part iv. § 165.

The cause of the puerperal fever, according to this writer, is an inflammation of the

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uterus. “ Sometimes an inflammation of the womb, says he, whether caused by the midwife, the stoppage of the *lochia*, or the like, will bring on *After-pains* as some call them; and then the symptoms generally are, a violent tension, heat, and pain in the hypogastric region, which the patient can scarce bear to have touched; and she can lie in no other position than on her back; if she tries ever so little to lie on a side, she feels a heavy and painful weight falling on the same side; the loins and groin on the contrary side suffering an intolerable pain; which increases with a tension on the belly, a fever, and difficulty of breathing; when the *lochia* either are lessened, or wholly stopt, with a constant inclination to make water, and sometimes with pains in the thighs. Plentiful, but proper bleeding (for the cure) with a cooling regimen, is, in general, absolutely necessary; and if the disorder proceed from a bandage round the *abdomen* being too tight, the cause must be removed; but if the inflammation be caused by a stoppage of the *lochia*, emmenagogues and all kinds of warmer stimulants and purgatives must be avoided; and the secretion of the milk must be promoted,

moted, which is a method I never knew any author to take notice of, or to follow, in order to remove these uterine complaints¹.”

1752. *A treatise on the theory and practice of midwifery.* By W. SMELLIE, M. D. London, 1762.

He supposes that this disease may arise either from an inflammation of the *uterus*, or an obstruction of the *lochia*; and that the one is generally the consequence of the other. “As there are seldom inflammations in the *uterus*, says he, without obstructions of the *lochia*, and seldom obstructions of the *lochia*, but there must be more or less of an inflammation of the *uterus*, they might be joined together².” When the disease is recent he orders the patient to lie quiet, and encourage a plentiful diaphoresis by drinking frequently of warm, weak, diluting fluids; and likewise by taking opiates and sudorifics in different forms, as may be agreeable to her stomach. Should these methods be used

¹ Pag. 338, 339.

² Vol. iii. pag. 448.

without

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without success, and the patient labour under a hot, dry skin, anxiety, and a quick, hard, and full pulse, the warm diaphoretics are to be laid aside, and recourse must be had to bleeding at the arm or ankle to more or less quantity, according to the degree of the fever and obstruction; and this evacuation must be repeated as there is occasion: when the obstruction is not total, it is supposed more proper to bleed at the ankle, than at the arm; and at the latter, when the discharge is altogether stopped¹.

1762. *Avis au peuple sur sa santé: Par MR. TISSOT. A Paris, 1770. tom. ii. chap. xxvi. § 369. Suites des couches.*

This experienced physician ascribes the cause, of the puerperal fever, either to an inflammation of the *uterus*, or a suppression of the *lochia*; but most probably to the latter. He includes, the most usual consequences of childbirth, under the four following heads: 1. An excessive hæmorrhage. 2. An inflammation of the *uterus*. 3. A sudden suppression of the

¹ Vol. i. pag. 408, 409.

lochia. 4. The fever, and other accidents, resulting from the milk. The inflammation of the *uterus*, he says, is discoverable by pains in all the lower parts of the belly; by a tension or tightness of the whole; by a sensible increase of pain upon touching it; a kind of red stain or spot, that mounts to the middle of the belly, as high as the navel, which spot, as the disease increases, turns black, and then is always a mortal symptom; by a very extraordinary degree of weakness; an amazing change of countenance; a slight *delirium*; a continual fever, with a weak and hard pulse; sometimes incessant vomitings; a frequent hiccough; a moderate discharge of a reddish, stinking, sharp water; frequent urgings to go to stool; a burning kind of heat of urine; and sometimes an entire suppression of it. For the cure he recommends bleeding; frequent clysters of warm water; injections of the same kind into the *uterus*; and aqueous fomentations to be continually applied over the belly. He observes that a total suppression of the *lochia* proves a cause of the most violent disorders, and should be treated exactly in the same manner as an inflammation of

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of the *uterus*: and that if unhappily hot medicines have been given, in order to force them down, the case will generally prove fatal.

1764. GERARDI L. B. VAN SWIETEN,
commentaria in HERMANNI BOERHAAVE
aphorismos de cognoscendis & curandis morbis.
Lugduni Batavorum, 1764. Morbi puer-
perii, tom. iv. § 1329, &c.

This learned commentator enters thoroughly into the spirit of his author, and explains in a full and masterly manner the text of his celebrated preceptor. He agrees with him that a suppression of the *lochia* is a cause of puerperal fevers, but, at the same time, seems rather inclined to think that they are more generally occasioned by a translocation of the lacteal matter, than of the *lochia*, upon different parts of the body. “*An non ex hactenus dictis (ait) concludi potest, metastasin lacteam producere posse omnia illa mala, quæ in textu enumerantur¹, & quæ lochiis suppressis tribui*

¹ Recited above in page 119.

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solent:

solent: prout nempe in has illasve partes deponitur materia lactea, & quidem tanto majori cum periculo, quanto partes, in quas deponitur, ad vitam magis necessariæ fuerint, uti etiam, si materia hæc deponatur in loca, ex quibus difficulter eliminari poterit. Non tamen in illa opinione sum, ac si lochia retenta nullum facerent periculum; sed tantum hoc monendum esse credidi, etiam de depositione materiæ lacteæ ad varia loca corporis cogitandum esse. Lochia enim naturaliter minuuntur illo tempore, quo febris lactaria solet incipere, & vix sanguinea fluunt tunc, sed potius subpurulenta. Primis autem diebus puerperii majus videtur esse à lochiis retentis periculum; sequentibus diebus, post febrim lactariam, minus; ita tamen, ut si retineretur illud purulentum, quod tunc exire solet, ab ejus resorptione in sanguinem multum mali metuendum foret¹.” He also observes, that a retention of the *lochia* may occasion an inflammation of the *uterus*; and on the contrary, that an inflamed *uterus*, from a laborious birth or any other cause, will be attended with a suppression of the lochial discharge. He

¹ Tom. iv. pag. 612.

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remarks that a *diarrhoea*, after childbirth, is not always to be dreaded, notwithstanding it be looked upon, by many, as a very dangerous symptom which ought to be removed; and mentions an instance where he himself was highly censured, by the bystanders, for not checking that evacuation. "*Probe memini, dum puerperæ, gemellos enixæ, curam gererem, me pessime exceptum fuisse ab adstantibus, dum nollem alvi fluxum comescere. Tertia die lochia omnino suppressa fuerant; venter durus & dolens erat. Mollissimis fomentis adhibitis, lenissimis aperientibus decoctis copiose potatis, per alvum exiverunt viridia, fætidissima, & quidem cum insigni levamine; ac brevè convaluit*." It hath been remarked above, that BOERHAAVE forbids bleeding, in the puerperal fever, unless urged by the greatest necessity; but omits mentioning the nature of that necessity. His ingenious commentator hath supplied that defect, as well from his own experience as that of others, in the following words: "*In puerperis pleuritide correptis, licet lochia fluerent, sanguinis missio profuit insigniter, quod*

¹ Tom. iv. pag. 613.

Et suis observationibus confirmat LA MOTTE, qui, lochiis bene prodeuntibus, repetitas etiam in brachio venæ sectiones instituit¹. Dum octavo à partu die acerbissimus lateris dolor corripuisset puerperam, TULPIUS, cum identidem novis insultibus urgeret dolor, ter pedis, & quinquies brachii, venas solvere debuit. Tantam sanguinis jacturam non solum toleravit, sed & ingens alvi profluvium sustinere debuit, antequam integre debellaretur morbus²."

1765. *Traité des maladies des femmes*. Par J. ASTRUC, Professeur Royal de médecine, & Médecin consultant du Roi. A Paris, 1765. tom. v. liv. iii. chap. xiv. § 3. Des vuidanges supprimées.

This physician ranges the puerperal fever under the head of obstructed *lochia*. The obstruction, he observes, may be total, or only partial; and may either happen about the second, or third day after delivery, or not till towards the seventh, or eighth. The former case he supposes to be much

¹ Tom. iii. pag. 35, 36.

² Tom. iv. pag. 634.

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more dangerous than the latter. He says the symptoms, which accompany this suppression, are different in different persons. The general ones are, a tension, swelling, and pain of the *uterus*; pain in the loins, bottom of the spine, and groin; a *nausea*, and vomiting; difficulty in breathing, and spitting of blood; rigors, fever, inflammation of the *uterus*, and sometimes a *delirium*, a *coma vigil*, or *coma somnolentum*.

He attributes a suppression of the *lochia* to four causes. The first of these causes is, the patient's catching cold: whether it be by the cold air getting into the *uterus*, through the neglect of the nurse, in not keeping the parts covered; or through the patient being exposed to cold at her feet, by not keeping the room sufficiently warm; or from the imprudence of suffering her to drink her liquors too cold. The second cause is, any unexpected trouble, grief, or fear: the passions of the mind, he says, especially when they are sudden, produce a constriction of the *uterus*, that wholly suppresses the discharge. The third cause is, a violent supervening *diarrhoea*; the consequence of indigestion, from

from having eaten too much; the great evacuation, that is made by stool, necessarily diminishing that which should be made by the *uterus*. Lastly, the fourth cause is, an inflammation of the *uterus*; which, by tumefying its substance, closes up all the veiny appendages from whence the blood of the *lochia* flows. This inflammation, he observes, is always the consequence of some hurt, which the interior part of the *uterus* has received, in a laborious delivery, from the hands of an unskilful midwife. He concludes, by remarking, that this last cause must produce a suppression of the most dangerous kind; and that experience but too much confirms it.

His sentiments, with respect to bleeding in this disease, he delivers in the following terms; “ *Si la suppression vient de l'une des deux premières causes, il faut d'abord employer la saignée pour prévenir la plethore, & pour relâcher & détendre la matrice, & tâcher de rétablir le cours des vuidanges. On a longtemps disputé si c'étoit du bras ou du pied qu'on devoit faire ces saignées; mais la question me paroît aujourd'hui décidée. Si les vuidanges ne sont pas tout-à-fait supprimées, c'est du pied qu'il faut saigner,*

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saigner, parce qu'on peut esperer, en attirant le sang sur la matrice, de forcer les obstacles & de rétablir les vuidanges. Mais si les vuidanges sont tout-à-fait supprimées, il ne faut point attirer le sang sur la matrice, d'où il n'a point d'issuë, & il faut saigner du bras. On ne peut pas fixer le nombre des saignés, mais si le mal presse, & que les forces de la malade le permettent, il faut en faire quatre dans les deux premiers jours ¹."

1766. *A Compendium of Midwifery. By THOMAS COOPER, M. D. London, 1766. part iii. sect. iii. Diseases consequent on delivery.*

This fever, he observes, is a truly dangerous and perplexing malady; that it proceeds generally from violent affections of the mind, as grief, despondency, and the like; from the drinking of strong liquors, or caudle too highly spiced; from obstructed perspiration, and evacuations. That the symptoms are, most commonly, a flow creeping pulse, which afterwards becomes

¹ Pag. 414.

very

very quick; that sometimes the pulse is quick at first, and slow afterwards; in some quick, full, and strong; in others, quick, with alternate heats and shiverings, pains in the belly, breasts, and sides; a cough, a dry skin, and hardness of the *abdomen*. He remarks that, as the disease increases, the inflamed *uterus* becomes putrid, and discharges a fetid *sanies*; and that, by the fourth day, the fever puts on quite a putrid nature.

“ Though this disorder, says he, is of the inflammatory kind, it seldom will bear to be treated as such; for which reason, unless the pains are very great, we should not bleed, at least for the first eighteen or twenty hours. Women after their first labour generally bear bleeding better than those who have had many children: the pulse, on a nice observation, will seldom be found tense, though quick and full, but is most commonly weak and undulating; nervous and hysterical women cannot bear the loss of much blood, wherefore, when it is necessary to bleed such patients, the quantity, at first taken away, should be small. In short, this will hold good in all constitutions in general, where this disorder occurs; as it is not cer-

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tain that diseases of the *viscera* are relieved by this evacuation: and if venæsection is used after the third day, unless the pains are violent, the pulse strong, and the inflammatory symptoms run high, it is generally prejudicial¹."

1768. *Essays on the puerperal fever, and on puerperal convulsions.* By THOMAS DENMAN, M. D. London, 1768.

This writer, as far as can be collected from the following passages, supposes the puerperal fever to be attended with an inflammation of the *uterus*. "There is a sense of throbbing pain, says he, and uneasy heat, through the parts in general. The urine is voided often, with pain, and in a small quantity, as if the inflammation, originally in the *uterus*, had reached the neck of the bladder². Great care must be taken in the administration (of clysters) or the patient will suffer intolerable pain, on account of the tenderness and inflammation of the *os internum*³." The predisposing and occasional

¹ Pag. 219.

² Pag. 9.

³ Pag. 33.

causes are said to be, a redundancy of the quantity, or an exaltation of the quality of the bile; unwholesome diet, sudden frights, and rising too soon after delivery; the use of hot spices, the neglect of procuring stool after delivery, and every accident which obstructs perspiration. This disease, he says, may follow a labour under the best circumstances; but that endeavours to dilate the *os internum*, and too hasty a separation of the *placenta*, or binding the *abdomen* tight after delivery will often produce it; he does not however include hard labours as a frequent cause, since it is remarkable that women recover very soon after them¹.

His sentiments, with respect to venæsection, are expressed in the following manner: "After the most careful observation, the event has so often proved to me, that large bleedings weaken the sick, without proportionably lessening the disease, that I have for a long time never taken away blood in any quantity. In very full, sanguine habits of body, bleeding may be necessary, but I think the repetition of it should be insisted upon with great caution²." As an

¹ Pag. 17, 18.² Pag. 23.

evacuant,

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evacuant, he recommends a powder composed of two grains of *tartarum emeticum*, and one scruple of prepared crabs eyes; of which he gives from two to six grains, and repeats it as circumstances require, judiciously observing, that no benefit is to be expected but from its sensible operation.

1769. *A new system of midwifery.* By
ROBERT WALLACE JOHNSON, M. D.
London, 1769. part iv. chap. vii.

He treats of the puerperal fever, in the seventh chapter, entitled, *Of the suppression of the lochia*. "A fever, says he, without a suppression, is not uncommon in the month of childbed; but a suppression, as far as I can discover, is never to be found without a fever: yet (if distinct) which is prior? or whether the suppression is not, in some cases, the primordial, and in others the consequent, it is not easy to determine. However, leaving the decision to future discovery, I shall, in order to inform the student as well as I can, take notice first of the most probable causes, &c. First then, the causes, which may be assigned, are very different, to wit, a peculiar

miasm in the atmosphere; an admission of cold air so freely to the surface of the body, as to excite rigors, &c. an ingress of such air into the cavity of the *uterus*, whereby the blood may be suddenly thickened or congealed; an over-heated or hurried circulation, by which the uterine vessels may be overcharged or suffocated; every thing capable of bringing on an inflammation in the substance of the *uterus*, or in any part so connected with it, as to affect it; any violent or instantaneous agitation of mind; or whatever is capable of exciting irritation. A suppression of the lacteal secretion, as also a *diarrhoea*, may contribute to it¹."

Among the curative indications, he reckons as the first, a timely diminution of the quantity of the blood. For this end, he recommends venesection as the most eligible means, and lays very great stress upon it, provided it be begun early, that is, soon after the attack, while the pulse is full, or before the *viscera* are much affected; for he remarks, that if this opportunity be lost, the inflammation increases fast, the pulse sinks, becoming small, quick, weak, and at last irregular; so that bleeding now would be very injudicious.

¹ Pag. 338, 339.

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1770. *Observations on the prevailing diseases in Great Britain.* By JOHN MILLAR, M. D. London, 1770. part iii. chap. ii. *Of the puerperal fever,*

This author, very judiciously, ranks the puerperal fever among the popular diseases of Great Britain; and indeed no writer, on the prevailing diseases of any country, can hardly, with propriety, omit it. He classes this fever with those which partake both of a putrid, and inflammatory nature. I shall give the author's opinion, of the causes of this disease, in his own words. "The changes which the humours naturally undergo in women, during their pregnancy, render them more liable to the contagion of putrid diseases; while the circumstances attending childbed produce inflammatory symptoms, and hence often arises a complicated fever, the most dangerous and difficult of cure of any which falls under the direction of the physician¹. When a woman in childbed is seized with a remitting fever, if there is no irregularity in the usual evacuations, the,

¹ Pag. 330.

symptoms

symptoms are nearly the same as those which were already described in treating of that disease; but her particular situation renders it more dangerous. If the usual evacuations are suppressed, the fever partakes more of inflammation, and is attended with particular symptoms which require a peculiar treatment. But the puerperal fever is much oftener occasioned by the opposite extreme; yet that natural evacuation is not too rashly to be pronounced excessive, since it is wisely intended to prevent the evil consequences which might arise from inflammation, or from obstruction in the vessels ¹."

Some physicians, he observes, assert that this disease is to be cured by venæsection, while others have maintained it to be pernicious, and that cordials, opiates, and emmenagogues, are the only medicines which can be safely used. When there is much pain, hardness, and swelling in the belly, and especially if any injury has been received during the time of labour, bleeding, he says, may be necessary; but that as this remedy is ever to be used with caution in the puerperal fever, the application of it should

¹ Pag. 333, 334.

always

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always be directed by the advice of an able physician; and that no general rule can be given concerning it, since there are many circumstances to be considered, which render almost every new case a particular study. Those of a delicate constitution, continues he, do not bear a loss of blood, and if it should be taken away imprudently, they are brought into great danger. If the hæmorrhage has been violent at the time of delivery, bleeding is then improper; but if, from the beginning, the natural evacuation has either been too small, or altogether suppressed; if the labour has been severe, and if any violence has been used, it then becomes absolutely necessary, and sometimes must be frequently repeated.

1771. *A treatise on female diseases.* By HENRY MANNING, M. D. London, 1771. chap. xx. *Of the puerperal fever.*

This is the latest author I have met with, who treats of the puerperal fever; and he brings us down nearly to the time that this publication was put to the press, that is, in the month of November 1771.

His

His sentiments, relating to the cause of this disorder, he expresses in the following terms. "From all the most accurate accounts of this disease, and from the period at which it generally commences, there is reason to conclude, that it owes its rise more immediately to accidents after delivery: for it is allowed, that it may follow a labour under the best and most desirable circumstances; though endeavours to dilate the *os internum*, are supposed frequently to produce it. The more immediate causes generally assigned by authors are, a stoppage of perspiration, too free an use of spices, and the neglect of procuring stools after delivery; sudden frights, too hasty a separation of the *placenta*, and binding the *abdomen* too tight. The putrid appearance, however, which this disease so soon assumes, affords ground to suspect, that the predisposing cause of it is a vitiated state of the humours: for it is generally observed to be most prevalent in an unhealthy season, and among women of a weakly and a scorbutic constitution¹."

¹ Pag. 397, 398.

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He remarks that, with regard to the method of cure, no disease has more divided the sentiments of physicians, than the puerperal fever. That the apparent indications and contra-indications of bleeding, and other remedies, arising from the complication of inflammatory and putrid symptoms; the equivocal appearance of the vomiting and purging, as whether they are critical or symptomatical; and the different causes from whence symptoms similar to each other may arise in pregnant women; all conspire to involve the subject in great obscurity and indecision. Speaking of the cure he says, that one of the most essential points to be ascertained, respects the propriety of bleeding. That a free use of the lancet has been generally regarded as the most successful expedient in practice; and that there are some instances of critical hæmorrhages which would appear to confirm its utility. But he thinks, he may safely affirm from experience, that, for one who will be benefited by large bleeding, a much greater number will be injured, and that even almost irretrievably. That, indeed, he is so sensible of this fact, that for several years he has seldom advised bleed-

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ing, except in women of plethoric constitutions, and in whom the signs of inflammation rose high: nor that even in such patients ought it to be repeated without great caution, and the existence of strong indications. And concludes with observing, that, though bleeding ought in general to be used with great caution, there are certainly many cases in which it is both necessary, and advantageous.

CHAP.

CHAP. VI.

The Author's Opinion of the Cause of this Disease.

MEDICAL writers have ranged the causes of diseases under various heads; some of them rather more subtle, than useful. I shall confine myself to three of them: the immediate, or proximate; the predisposing, or remote; and the occasional cause. The immediate, or proximate cause, of a disease, is that which is sufficient of itself to produce the disease. The predisposing causes are such as precede, and lead on to the immediate; the occasional are such as succeed, and promote the predisposing causes: these, being all combined together, form the immediate, or proximate cause.

The immediate cause, then, of the puerperal fever, is an inflammation of the intestines, and *omentum*. For the truth of this assertion I appeal to dissections. The chief predisposing cause, as I apprehend, is

the pressure of the gravid *uterus* against the intestines, and *omentum*.

The *uterus*, after impregnation, rises gradually, out of the *pelvis*, into the cavity of the *abdomen*. As it ascends, it carries its burden along with it, which receives a gradual increase in its bulk every day, for the space of nine months; till at last it becomes so large as to distend the *abdomen* to an amazing degree. The progress of this distension is supposed to be nearly as follows: In the space of three months, after conception, the *uterus* rises above the brim of the *pelvis*, and the tumour in the *abdomen* begins to appear. At the fifth month, it is increased to a much greater magnitude, and rises up as high as the middle space between the *pubes* and the navel. By the seventh month, the *fundus uteri* reaches as high as the navel, and at the eighth month, it is advanced midway betwixt the navel and *scrobiculus cordis*. In the ninth month, it rises to within a small space of the lower point of the breast-bone; and the neck of the *uterus* is then wholly distended with the *fundus*, in a globular form. It is easy to imagine that the regularity of this distension must vary, more or less, in almost

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almost every gravid subject; according to the bulk of the child, the quantity of waters contained in the *uterus*, and many other contingent circumstances attending gestation: so that the very same woman will hardly carry her burden twice, exactly alike. It is remarked by authors that the substance of the *uterus* does not, in general, grow thinner by extension, but rather increaseth in thickness; hence its pressure against any part which it may happen to rest upon, will be pretty great, even to the time of delivery. As the *uterus* increases in magnitude it will begin to sit heavy upon the intestines, and by the end of seven months I should imagine, will press strongly against them. From that time to the approach of delivery the *abdomen* must be so tense and full, and the pressure so great against both the intestines and *omentum*, as greatly to interrupt the circulation in various parts of those *viscera*. And, near the term of childbirth, it must be so much increased, that it appears to me much more wonderful, that the disease does not oftener happen, than that it happens so often as it does. But the all-wise Creator, who is provident in all his works, hath filled the gravid

uterus

uterus with a fluid, for the preservation of the intestines as well as the tender infant, during a state of pregnancy, and constructed the former as so many large hollow moveable tubes, filled with air and other fluids, rolling gently one upon another, and therefore easily yielding to pressure, and not so soon affected by it. The same wisdom is also conspicuous in the situation, and structure, of the *omentum*; for it is generally well guarded by plenty of fat, and not very susceptible of feeling; and is placed, in a loose flowing state, upon the softly yielding intestines. May not likewise that distribution of the fat in lines, which run on each side its blood-vessels, be designed as so many bolsters to defend them more effectually from pressure? At least, could any thing be more artfully devised for such a purpose! The *omentum*, in the latter part of pregnancy, must either lie flat, which is its natural situation, or be rumpled and carried up, by the gravid *uterus*, in folds or doublings. When this last is the case, which probably is not unfrequently so, the danger of a strangulated circulation will be the greater.

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The general effects of this pressure of the gravid *uterus* upon the intestines and *omentum* will be, to interrupt the free circulation of the blood, particularly in those parts on which it happens to be most prevalent, and to destroy the tone of the blood-vessels. The other parts, more free from this compression, will receive a larger quantity of blood into their vessels than usual; by which means they will be distended, their coats weakened, and the surrounding capillaries filled with half stagnating fluids, and may become more or less inflamed. The evils attending this pressure must be increased by respiration. The diaphragm, at every full inspiration will press the intestinal *viscera* strongly against the distended *uterus*, and the abdominal muscles will as strongly resist it. Hence all violent exercise, or labour, in an advanced state of pregnancy, must be very hurtful. The frequent vomitings, which happen to some women in the latter end of gestation, may for the same reason be injurious. If the child's head, or any hard part of its body, should be so placed in the *uterus* during gravidity, as to press strongly upon any particular part of the intestinal canal or *omentum*, then the danger

danger will be increased; because in that case, it would act upon it like a hard fixed body. As I am no practitioner in midwifery, I have not had an opportunity of attending so minutely to the different complaints, arising from this supposed pressure, during the state of pregnancy, as those who exercise that art. But I frequently meet with women, after delivery, endeavouring to account for their pains in the *abdomen* affecting any particular part, from the child's lying more on this, or that side, during gestation.

The nearer the woman approaches to her time, the greater will be the mischiefs arising from this compression. As soon as actual labour comes on, the woman is seized with particular pains, returning at intervals, which occasion such repeated convulsive motions upon the abdominal muscles and diaphragm, as to force the child down into the *pelvis* and cause delivery. By this painful and laborious action the body is much heated, a fever, for the time being, is produced, the intestines and *omentum* are strongly rubbed, and ground as it were, against the gravid *uterus*, at every convulsive throe, till the child makes its way into the *pelvis*.

After

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After the expulsion of the child and after-birth, the *uterus* gradually becomes less and less, and at last shrinks down into the bottom of the *pelvis*. The teguments of the *abdomen*, which before delivery were greatly distended, are now relaxed, and by degrees recover nearly their former state. The intestines and *omentum*, being freed from their incumbrance, the circulation becomes more equal through their whole substance; the vessels of those parts, on which the *uterus* chiefly lay, are immediately filled with blood; but being greatly weakened, by such a long continued pressure, they have almost lost their elastic power, and can scarcely propel forwards their contained fluids. Just as we see a compression, on any soft external part of the body, will cause a blackness in that part, probably from an extravasation of the fluids, which will not go off for several days. And why may not the same thing happen to the tender substance of the intestines and *omentum*? By these means the vessels become completely filled with blood, and are ripe for inflammation. And if the injury done the intestines and *omentum*, by these causes, or others to be

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enumerated hereafter, be so great as to produce an actual inflammation, then will arise the puerperal fever. But if on the contrary, the vessels soon recover their strength, so as to keep up a free circulation, in that case the patient will never be sensible of any injury, and will be restored to her health, as if nothing had happened. From hence we may account for the mischief arising from the neglect of procuring stools, soon after delivery; and for the great danger of keeping lying-in women hot, and giving them warm spices, wine, and spirituous cordials; lest the intestines and *omentum*, already turgid with blood, should catch the flame and destroy the patient!

I will now proceed to consider some other evil effects arising from this pressure. By long compression the intestines are, in some measure, deprived of their peristaltic motion, their coats are weakened, and become in a manner paralytic. Hence costiveness, windy complaints, and spasmodic constrictions in the bowels, so common to pregnant women. The consequence is, that, after delivery, their tone being lost, they become quickly

quickly over-distended with *flatus*, which I imagine happens more or less after all deliveries, but particularly after those that are unsuccessful; the capillary vessels of their tunics having likewise, as said above, lost their elasticity, are easily distended with blood, and soon brought into an inflammatory state. Besides, any particular part of the intestines, not covered by the *omentum*, will be particularly liable to these inconveniencies. Now that part of the intestinal canal, which is situated in the hypogastric region, is seldom covered by the *omentum*, but lies naked, and exposed to this compression. And as the child seems chiefly supported in the *abdomen*, by resting upon the brim of the *pelvis*, the greatest pressure will commonly be upon the small intestines, either in the right or left iliac region, or directly in the middle above the *os pubis*. From this last circumstance I account for the pain and tenderness of the hypogastric region, which is generally the constant and inseparable companion of this disease, and therefore constitutes the chief pathognomonic symptom. In dissection the first, and sixth, the intestines were chiefly affected on the left side; probably from the

uterus pressing more on that side, than the other. In the sixth dissection it is observed, that the coats of the intestines were more thickened on the left side of the *abdomen*, than on the right; which appearance is generally deemed a certain sign of a preceding inflammation. And this, in all probability, was the cause of that partial circumscribed inflammation of the intestines, a little above the *os pubis*, mentioned also in the same dissection¹. From all which it appears, that the intestinal canal must particularly suffer in this disease; especially in its inferior part, where the pressure is so great, and so constant, and where the intestines have no apron, or covering, such as the *omentum*, to defend them. And from hence likewise, as I imagine, arises the great deception, among authors, relating to the cause of this disorder. For, finding it generally accompanied with a pain in the region of the *pubes*, happening soon after delivery, they immediately concluded that it must of course be owing to an inflammation, or some other affection of the *uterus*; which communicated its effects to the

¹ Pag. 53.

hypogastric region, and was irritated by any compression made upon the *abdomen*. Whereas it appears, by the dissections, that the *uterus* was sunk down within the cavity of the *pelvis*, out of the reach of external pressure, and in a sound state. Hence then, I think, we may fairly conclude, that what they in general ascribed to an inflammation of the *uterus*, was owing purely to an inflammation of the intestinal canal.

The *faeces* being long pent up, by the pressure of the gravid *uterus*, become putrid, and, in the large intestines, often so hard as to be concreted into a sort of balls. This evil extending, more or less, through the whole intestinal circumvolution, that is, six times the length of the person's body, affords an ample source of putrefaction to irritate, and corrupt the intestines, and, at length, to infect the whole fabrick; but particularly the stomach and *omentum*, parts which are injured by the same causes, and closely connected. Those *viscera*, being once diseased, will act reciprocally upon each other: the bowels will affect the stomach, and injured *omentum*; these, in return, will reflect back the disorder upon the intestines; by which means

means the complaints will sometimes become so general over the whole *abdomen*, that neither the physician nor the patient can hardly describe the true situation of the disorder; however, generally speaking, its chief seat will be found in some part of the hypogastric region. A fever will succeed, accompanied with great thirst, violent pain of the head, and frequently with a sickness at the stomach, or vomiting. The body will be either costive, or nature, by a beneficent effort, will indicate the method of cure, by a *diarrhoea*. If this last should be the case, and the discharge should be very plentiful, so as thoroughly to empty the intestinal canal, and make a revulsion from the inflamed intestines and *omentum*, the disease will terminate favourably; unless it hath unhappily taken too deep root, before this salutary evacuation was brought about. Then, indeed, the intestinal canal and *omentum* will become more and more affected, and will soon change from an inflamed, to a gangrenous state.

What I have here advanced, may undoubtedly appear very singular. It is true we have no accounts, in any author which I have met with, of an inflammation of the intestines

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tines and *omentum* being the general cause of fevers after delivery, and arising chiefly from the pressure of the gravid *uterus*. But there are some passages, in several writers of no small distinction, that strongly indicate a possibility of the *omentum* being greatly injured, merely by compression. CASPAR BAUHIN, treating of the *omentum*, says, "That in some women, after delivery, it remains so collected about the middle of the belly, as frequently to excite considerable pains¹." And the ingenious RUYSCH had often been surpris'd with hard oblong tumours, remaining in the *abdomen* after childbirth, for years together, with little or no pain, though generally with some inconvenience or other, till he discovered the true cause by dissection. For he then found, in one of these cases, the *omentum* very much thickened, elongated, and degenerated into a fat fleshy scirrhus substance, adhering above to the bottom of the stomach, and below to the *fundus uteri*²." Baron van SWIETEN endeavours to account for such instances, as the first above-mentioned, by supposing the

¹ Theat. Anatom. lib. i. cap. xii. pag. 44.

² Observ. Anatom. chirurg. Cent. observat. lxiii. pag. 59.

omentum

omentum to be rolled up into the *abdomen*, by the rising *uterus*, and there, by the pressure of it, or by some other cause, to become exsiccated, and to have its *lamellæ* concreted, in such a manner, as to hinder it afterwards from falling down, and regaining its proper situation. His words are, “*Videtur autem quandoque omentum ab utero assurgente convolvi, & complicari: si jam, vel ab uteri compressione, vel ab alia quacumque causa, siccescat omentum, concretio lamellarum omenti metueda erit, nec depleto per partum utero poterit evolvi, ut pristinum locum occupet*”¹. But might not such changes be rather attributed to a preceding inflammation of the *omentum*, caused by the pressure of the *uterus* during gravidity? The celebrated MORGAGNI, in his late excellent work, seems to be of this opinion, and quotes these very two instances: “During pregnancy, says he, the *omentum*, being compressed by the *uterus* and the other *viscera*, and for that reason sometimes inflamed, may be formed into an oblong and almost scirrhus tumour, which remains in some after delivery; as has even

¹ Comment. in Boerh. Aph. tom. iv. pag. 460.

been

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been observed by me; and affects them sometimes with pain, but always with some inconvenience or other, as RUYSCH has taught us, and, before him, BAUHIN had hinted¹. These observations therefore (to which I did not attend till I had committed my thoughts on this subject to paper) help to confirm me in my opinion; namely, That the immediate cause of the puerperal fever, is an inflammation of the intestines and *omentum*; and that the chief predisposing cause, is the pressure of the gravid *uterus*.

Another great misfortune attending gravidity is, that the whole abdominal *viscera*, being straitened for want of room, will press strongly against the diaphragm, and *aorta descendens*, by which means the lungs cannot be sufficiently expanded, a lesser quantity of blood will be carried into the inferior parts of the body, and a greater quantity retained in the superior, that is, from the midriff upwards. This over-flow of blood will crowd in upon the heart, which will propel it directly into the *aorta*, in order to be carried into the extreme parts of the body. But the

¹ De Sed. et Caus. Morb. tom. ii. ep. xlviii. § 46.

circulation being interrupted, in the inferior part of that great trunk, prevents its passing readily to the lower extremities, therefore a larger quantity must necessarily pass into the *aorta ascendens*, and quickly return again into the lungs from whence it came. By these means, the circulation will be confined, as it were, to a lesser circuit; the capillary vessels of the lungs will be continually over-distended with blood; the circulation in them greatly impeded; and that organ always prepared to receive an inflammatory or putrescent *diathesis*, upon any supervening causes, which may tend to bring on such a disposition. The violent circulation, and heat, produced by the labour-pains, together with the fever, caused by the inflammation of the intestines and *omentum*, will, I imagine, very frequently be fully sufficient to effect this. Hence, probably, comes that easy transition which this disorder seems to make upon the lungs! The difficulty of breathing, and the cough; the palpitation of the heart, and the redness of the face after exercise, so common to pregnant women, support the former part of our argument; and the peripneumonic symptoms, so often accompanying the

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the puerperal fever, sufficiently countenance the latter.

From what has been said we may conclude, that the degrees of this disease may be various, from the slightest to the most violent, according to the state of the bowels and *omentum*, at the time of the attack. If they are very slightly affected, the disease, by a gentle treatment, may go off in a very little time. If more than slightly affected, then it will require a longer space, and more efficacious methods. If still more affected, the danger will rise in proportion; and so on, till at length it may arrive at the most violent degree, especially when complicated with an inflammation of the lungs, and be in danger of proving fatal in a very short time! This is not mere surmise; for, I think I dare venture to affirm, from my own experience, that there are all these states, and degrees, of the puerperal fever.

And hence also we may be able to give some reason, why this disease is the most easy, and the most difficult to cure: Why its slightest degree is only a small remove from the state in which all women are, after childbirth; and why its most violent de-

gree is only a little remove from death; Why all lying-in women have been, and ever will be, subject to this disease; because the causes that produce it are common to pregnant women, at all times, and in all climates: Why the *uterus* is not, according to the generally received opinion, the chief part injured; and why, on dissection, it was even found in a sound state*: Why neither a suppression of the *lochia*, nor of the milk, is the cause of this disorder; but mostly symptomatical: As also why the puerperal fever is not an infectious disease, any more than the iliac passion, a pleurisy, a *nephritis*, or an inflammation in any other part of the body: Why it may in general be easily cured, if taken at the beginning; and why a neglect of it must often prove fatal; Why all testaceous powders, and astringents of every kind, given at the beginning, must frequently prove destructive; and why a compression by bandage upon the *abdomen*, in this malady,

* Instances, of this kind, are preserved in the anatomical MUSEUM, of that accurate and ingenious Anatomist Mr. HENRY WATSON of Rathbone-Place, Soho; whose valuable Collection is always open for the general improvement of medical science.

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or even after any delivery, is hurtful: Why miliary, and other febrile eruptions, are not the necessary consequence of this disorder, but merely accidental *. From what has been proposed we may likewise learn, why clysters, and cathartics, are so effectual in the cure of this distemper, and why all other methods should prove unsuccessful, without them; why bleeding, therefore, may be only looked upon as a secondary help, though it should always be the first in point of time: Why in all fevers, succeeding a state of pregnancy, an evacuation by the intestinal canal is the principal remedy: And lastly, why a thorough acquaintance with the nature, cause, and cure, of the puerperal fever, is a certain key to the knowledge, and treatment, of all fevers happening after delivery; whether under the name of milk-fever, or any other.

Having pointed out the noxious effects, of the primary and grand predisposing cause of this disease, the pressure of the gravid *uterus*,

* On this head consult the judicious writings of the celebrated Professor ANTONIUS DE HAEN, in his *Ratio Medendi*.

I will

I will proceed to enumerate some other causes which have the same evil tendency. These happen either before, or after delivery. The principal causes, after delivery, which may be termed occasional, are too free an use of cordials and spices; an over-heated air; an unhealthy state of the atmosphere; uneasiness of mind; a bad habit of body; an obstructed perspiration; but especially the neglect of keeping the belly gently open soon after childbirth: and in a word, every possible accident which is capable of increasing the circulation of the blood. For the intestines and *omentum*, being prepared as it were, by the preceding uterine compression, to receive any febrile commotion raised in the blood, will be ever ready to catch the flame, let the exciting causes be whatsoever they will: I only particularize the above as the most common, and the most prevalent.

And as the puerperal fever hath a strong tendency, to run quickly into a state of putrefaction; all causes, during pregnancy, which contribute to bring on a corruption of the blood and juices, will greatly conduce to this disease. Hence breathing a moist, or impure air; want of cleanliness; indolence; vexation; intemperance

intemperance of every kind; great costiveness; hard labour, or violent exercise; high-seasoned meats; too much animal food; are all very powerful predisposing causes. Pregnant women, therefore, should be very careful, to avoid all these things as much as possible. Their diet should be plain, and simple; with a due mixture of animal and vegetable substances. They should eat plentifully of fruit, and drink mild, cooling, and acescent liquors. If this sort of diet be not sufficient to keep the body gently open, as costiveness is particularly to be avoided, they should take, now and then, a little cream of tartar, lenitive electuary, or *magnesia*. Their exercise should be regular, but always moderate; they should carefully guard against violent passions, and all anxious cares: and to avoid the bad effects of indolence, let them employ themselves in such domestic occupations as amuse the mind, without fatiguing the body.

I will now endeavour to account for some of the morbid appearances, which I observed in the dissection of those who died of this fever. The depraved liquors, found in the cavity of the *abdomen* and *pelvis*, sprang, in
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all probability, from that volatile lymph, which is continually perspiring through every pore of the abdominal *viscera*, and *peritonæum*; and from the diseased parts of the intestines and *omentum*. The quantity of *pus*, which was found mixed with these vitiated fluids¹, was probably the effects of the inflammation on the surface of the last-mentioned *viscera*. Just in the same manner as we see *pus* frequently generated on the external parts of the body, in some inflammations of the eyes for example, without any excoriation, or loss of substance. This opinion seems to be confirmed by the sixth dissection, where a quantity of *pus* was seen actually adhering to the integuments which lay over the recently inflamed surface of the intestines². This purulent discharge, as fast as it collected, would, in general, be washed away by the perspirable fluids steaming through the pores of the abdominal cavity, as well as by the general mass of liquors collected in the *pelvis* and *abdomen*, and would be found mixed therewith.

¹ Pag. 40. 43. 48. 56.

² Pag. 53.

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The great inflation of the stomach and intestines¹, might be owing partly to a paralytic weakness of their coats, from long pressure, so as to render them easily distended; but particularly to the air continually generating from the putrefaction of the excrementitious humours, causing irritation and spasmodic constrictions in various parts of the intestinal canal. As a proof of this last we find, where a profuse discharge by stool hath come on from the beginning, and continued through the whole course of the disease, so as to carry off this putrescent matter as fast as it was collected, that the intestines were not so distended with *flatus*; as happened in the subjects of the first, and fourth dissection.

The slight adhesion of the intestines to each other², might be principally caused by the inflammation of their coats, assisted by pressure. The inflamed *omentum* when it is not rumpled up, but lies smoothly over the surface of the intestinal canal, may likewise sometimes tend to bring about this effect, In the subject of the fourth dissection, where

¹ Pag. 41. 43. 48. 53.

² Pag. 38. 41. 48.

the

the *omentum* covered the whole surface of the intestines, it adhered closely not only to the *viscera* below, but to the *peritonæum* above¹. The greater or less degree of this adhesion may also depend pretty much upon the greater or less quantity of fluid collected in the *abdomen*; which by its interposition might hinder, or dissolve, such continuity. The dryness of the parts, in the fourth subject of dissection, was, as I apprehend, the chief cause of that general adhesion of the *omentum* to the whole compass of the *abdomen* which lay within its contact.

There is one circumstance, appearing on dissection, which at first seems almost unaccountable. I mean, how it comes to pass that the intestines and *omentum*, in the space of three or four days from the time of complaining, should receive so much injury! The subject of the third dissection complained only on the third day after delivery, and she died on the sixth, with the intestines greatly injured, and the *omentum* in a gangrenous state. It is difficult to imagine how the malady, could make such a progress in

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so short a time. Yet this circumstance, strange as it is, strongly corroborates the opinion advanced above; namely, that the intestines and *omentum* become so chafed and irritated, by the compression and friction, of the gravid *uterus*, during labour, as to be almost in a state of inflammation, in most women, at the time of delivery: and that very slender supervening causes, such as have been recited, will frequently reduce it to that state, and thus bring on the puerperal fever. Nay, I dare almost venture to go further and say, that it is not impossible, but very probable, that the *omentum* may sometimes be in a state of inflammation even before delivery, and the patient not be sensible of it. Suppose the *uterus*, for instance, should make a long continued pressure upon one particular spot, at the lower part of the *omentum*, and all the rest be pretty free. Might not an inflammation take place, some days preceding delivery, upon that particular part only, and be some time before it spread so as to affect the whole *omentum*? Now, in such a case, I presume, that the patient would not be immediately sensible of any pain, because of the insensibility of the

omentum; that is, not till the inflammation had spread itself pretty nearly all over that organ, and reached the upper part, where the nerves become larger, and where it is connected with the other *viscera*. And if some slight pains should come on, either before, or immediately after delivery, the patient might confound them with labour, or after-pains, and pay no regard to them till the inflammation became general. In this case, as the disease advanced, a supuration, or gangrene, or both, would seize first upon the spot primarily affected, and from thence gradually advance upwards. The intestines also, though actually inflamed, are not always attended with that degree of pain, fever, and other violent symptoms, which are commonly expected. I have known a puerperal patient sit up in bed, eat heartily, and complain of very little pain in the *abdomen*, unless upon pressing it, yet the disease in a few days hath proved mortal, and I have found the intestines greatly inflamed. By these means the disease may perhaps, now and then, make great progress before delivery, and either not be felt at all, or be mistaken for other pains. Besides,
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the female sex, being subject, from their peculiar make and nature, to a variety of changes and pains about the region of the *abdomen*, are more inured, as it were, to pain in general, and bear it much better, upon most occasions, than men. And this also may be one great reason why they often neglect the first symptoms of the puerperal fever, thinking, like many of their other complaints, they will cease of themselves.

From the insensibility therefore of the *omentum*, from the disease sometimes beginning at its lower part, and from the primary degrees of pain in the intestinal canal being mistaken for others of a different nature, I account for the seeming inconsistencies with respect to the time of complaining, and the great havock which is found to be made upon the intestines and *omentum*, so soon after the disease puts on its true appearance. Upon the same principles we may account for the distemper coming on, either before, or immediately after delivery; for the mortification which had particularly seized the lower part of the *omentum*, in the subjects
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of the second, and fourth dissection¹: as also for the sudden and imminent danger which, in some cases, must attend it. And lastly, from what has been said, the curious reader may likewise explain many other particulars, which will naturally occur to him in the perusal of the description, prognostics, dissections, and cure of this disease; but which would be too tedious to recount here. It is sufficient, for the present purpose, to have drawn the great out-lines which lead to all the rest.

To conclude: we have seen in the preceding chapter that it is the general opinion of authors, from the time of HIPPOCRATES to this day, That this disease principally arises either from a suppression of the *lochia*; an inflammation of the *uterus*; a retention of the milk; or from some other complaint peculiar to the *uterus*. My differing so widely in opinion, therefore, from the established sentiment of so many ages, may require some apology. All that I can offer in my defence is, that I have drawn my notion, of the cause

¹ Pag. 40. 45-

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of this disease, from a course of reasoning supported by dissections; and have grounded my theory, upon a careful examination of all its symptoms. Appealing to the candour of the reader, I humbly submit the whole to stand, or fall, by the test of future observations; and lest I should have erred, I will now make the same excuse, and in the same words, as I have upon another occasion¹. *Nunc propositum meum perfeci, et per totum opus, intrare tentavi in abdita quasi et penetralia morbi, quo facilius ejus latebras et recessus patefacerem, omnibusque exponerem; quod si recte peregi, mihi abunde est; sin minus, humanum est errare.*

¹ In Libello de Scorbuto, pag. 91.

F I N I S.

ERRATA.

In Preface, Page vi. Line 1, *for* ffects—read effects.

In Page after Contents, *for* Vere, scire—read Vere scire,

In Treatise, Page 8, Line 2, *for* noways,—read in no wise.

Page 56, Line 6, *dele* a pretty large quantity of thin bloody liquor was found in each cavity of the thorax.

Page 69, Line 12, *for* The London—read The City of London.

Page 72, Line 7, *for* tr ment—read treatment.

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